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<110> Lehmann-Bruinsma, Karin
Liaw, Chen W.
Lin, I-Lin

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 <212> PRT
 <213> Homo sapiens

<400> 347
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Tyr	Phe	Leu	Lys	Leu	Arg	Leu	Asp	Thr	Asn	Thr	Arg	Asn	Pro	Trp	Phe	
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Pro	Glu	Phe	Trp	Gln	His	Arg	Phe	Gln	Cys	Arg	Leu	Pro	Gly	His	Leu	
	370					375					380					
Leu	Glu	Asn	Pro	Asn	Phe	Lys	Arg	Ile	Cys	Thr	Gly	Asn	Glu	Ser	Leu	
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Glu	Glu	Asn	Tyr	Val	Gln	Asp	Ser	Lys	Met	Gly	Phe	Val	Ile	Asn	Ala	
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Ile	Tyr	Ala	Met	Ala	His	Gly	Leu	Gln	Asn	Met	His	His	Ala	Leu	Cys	
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Pro	Gly	His	Val	Gly	Leu	Cys	Asp	Ala	Met	Lys	Pro	Ile	Asp	Gly	Ser	
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Lys	Leu	Leu	Asp	Phe	Leu	Ile	Lys	Ser	Ser	Phe	Ile	Gly	Val	Ser	Gly	
	450					455					460					
Glu	Glu	Val	Trp	Phe	Asp	Glu	Lys	Gly	Asp	Ala	Pro	Gly	Arg	Tyr	Asp	
465					470					475					480	
Ile	Met	Asn	Leu	Gln	Tyr	Thr	Glu	Ala	Asn	Arg	Tyr	Asp	Tyr	Val	His	
				485					490					495		
Val	Gly	Thr	Trp	His	Glu	Gly	Val	Leu	Asn	Ile	Asp	Asp	Tyr	Lys	Ile	
			500					505					510			
Gln	Met	Asn	Lys	Ser	Gly	Val	Val	Arg	Ser	Val	Cys	Ser	Glu	Pro	Cys	
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Leu	Lys	Gly	Gln	Ile	Lys	Val	Ile	Arg	Lys	Gly	Glu	Val	Ser	Cys	Cys	
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Trp	Ile	Cys	Thr	Ala	Cys	Lys	Glu	Asn	Glu	Tyr	Val	Gln	Asp	Glu	Phe	
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Thr	Cys	Lys	Ala	Cys	Asp	Leu	Gly	Trp	Trp	Pro	Asn	Ala	Asp	Leu	Thr	
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Gly	Cys	Glu	Pro	Ile	Pro	Val	Arg	Tyr	Leu	Glu	Trp	Ser	Asn	Ile	Glu	
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Phe	Val	Thr	Leu	Ile	Phe	Val	Leu	Tyr	Arg	Asp	Thr	Pro	Val	Val	Lys	
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60593360

Gly Tyr Val Cys Pro Phe Thr Leu Ile Ala Lys Pro Thr Thr Thr Ser
645 650 655

Cys Tyr Leu Gln Arg Leu Leu Val Gly Leu Ser Ser Ala Met Cys Tyr
660 665 670

Ser Ala Leu Val Thr Lys Thr Asn Arg Ile Ala Arg Ile Leu Ala Gly
675 680 685

Ser Lys Lys Lys Ile Cys Thr Arg Lys Pro Arg Phe Met Ser Ala Trp
690 695 700

Ala Gln Val Ile Ile Ala Ser Ile Leu Ile Ser Val Gln Leu Thr Leu
705 710 715 720

Val Val Thr Leu Ile Ile Met Glu Pro Pro Met Pro Ile Leu Ser Tyr
725 730 735

Pro Ser Ile Lys Glu Val Tyr Leu Ile Cys Asn Thr Ser Asn Leu Gly
740 745 750

Val Val Ala Pro Leu Gly Tyr Asn Gly Leu Leu Ile Met Ser Cys Thr
755 760 765

Tyr Tyr Ala Phe Lys Thr Arg Asn Val Pro Ala Asn Phe Asn Glu Ala
770 775 780

Lys Tyr Ile Ala Phe Thr Met Tyr Thr Thr Cys Ile Ile Trp Leu Ala
785 790 795 800

Phe Val Pro Ile Tyr Phe Gly Ser Asn Tyr Lys Ile Ile Thr Thr Cys
805 810 815

Phe Ala Val Ser Leu Ser Val Thr Val Ala Leu Gly Cys Met Phe Thr
820 825 830

Pro Lys Met Tyr Ile Ile Ile Ala Lys Pro Glu Arg Asn Val Arg Ser
835 840 845

Ala Phe Thr Thr Ser Asp Val Val Arg Met His Val Gly Asp Gly Lys
850 855 860

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865 870 875

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<212> DNA
<213> Homo sapiens

<400> 348
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31

<210> 349

<211> 31
 <212> DNA
 <213> Homo sapiens

<400> 349
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31

<210> 350
 <211> 1062
 <212> DNA
 <213> Homo sapiens

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 <211> 353
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Lys Arg
245 250 255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser
290 295 300

Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
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Thr

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<213> Homo sapiens

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<210> 354
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<212> DNA
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<211> 353
<212> PRT
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Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
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 <213> Homo sapiens

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<210> 357
 <211> 71
 <212> DNA
 <213> Homo sapiens

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<210> 358
 <211> 1349
 <212> DNA
 <213> Homo sapiens

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<210> 359
 <211> 446
 <212> PRT
 <213> Homo sapiens

Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	0.52	0.50	0	1
Marital Status	0.65	0.48	0	1
Education	12.8	2.1	9	16
Income	3200	1500	1000	8000
Health Status	0.78	0.41	0	1
Employment	0.85	0.36	0	1
Stress Level	4.2	1.8	1	7
Sleep Quality	3.5	1.2	1	5
Exercise Frequency	2.1	1.5	0	5
Diet Quality	3.8	1.1	1	5
Alcohol Consumption	1.5	1.0	0	3
Tobacco Use	0.2	0.4	0	1
Family Size	2.5	1.2	1	5
Home Ownership	0.72	0.45	0	1
Commute Time	25	15	5	60
Work-Life Balance	3.2	1.4	1	5
Life Satisfaction	4.5	1.0	1	5
Overall Well-being	4.8	1.1	1	5

Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	0.52	0.50	0	1
Marital Status	0.65	0.48	0	1
Education	12.8	2.1	9	16
Income	3200	1500	1000	8000
Health Status	0.78	0.41	0	1
Employment	0.85	0.36	0	1
Stress Level	4.2	1.8	1	7
Sleep Quality	3.5	1.2	1	5
Exercise Frequency	2.1	1.5	0	5
Diet Quality	3.8	1.1	1	5
Alcohol Consumption	1.5	1.0	0	3
Tobacco Use	0.2	0.4	0	1
Family Size	2.5	1.2	1	5
Home Ownership	0.72	0.45	0	1
Neighborhood Safety	4.5	1.0	1	5
Access to Healthcare	4.8	0.8	1	5
Community Support	3.2	1.5	1	5
Life Satisfaction	3.8	1.2	1	5
Mental Health Score	2.5	1.0	1	4
Physical Health Score	3.5	1.0	1	4
Overall Well-being	3.0	1.0	1	4

Trp-640-60

290	295	300	
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys			
305	310	315	320
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala			
	325	330	335
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly			
	340	345	350
Thr Tyr Phe Pro Cys His Pro Ala His Leu Gln Val Arg Ala Pro Gln			
	355	360	365
His Ala Thr Gly Arg Asp Ala Glu Lys Asn Pro Arg Pro Leu Gly Lys			
	370	375	380
Cys Arg Lys Ala Gly Leu Gly Val Val Ala Met Lys Ile His Ser Met			
385	390	395	400
Gly Ser His Val Ala Gly Glu Ala Trp Ser Gln Val Trp Gly Phe Gln			
	405	410	415
Ile Ser Glu Ile Pro Trp Gly Ser Arg Met Arg Pro Leu Asp Arg Thr			
	420	425	430
Glu Ala Glu Gln Glu Asn Met Leu Val Trp Ile Thr Gly Cys			
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<210> 363

<211> 353

<212> PRT

<213> Homo sapiens

<400> 363

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35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val

	180		185		190
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe	195	200	205		
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile	210	215	220		
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala	225	230	235	240	
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg	245	250	255		
Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr	260	265	270		
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr	275	280	285		
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser	290	295	300		
Tyr Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys	305	310	315	320	
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala	325	330	335		
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly	340	345	350		
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 <212> DNA
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<210> 365
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<400> 365
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<210> 366
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<213> Homo sapiens

<400> 366

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cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
accctggtga tctgcctcct gtgggcccct tccttcatca gcatcacccc tgtgtggctg 540
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ccagacactg acctctactg gttcacccctg taccagtttt tcctggcctt tgcctgcct 660
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cccgcctccc agcgcagcat ccggtgcgg acaaagagg tgaccgcac agccatcgcc 780
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tatgccaaca gctgcctcaa ccccttctgt tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062
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<210> 367

<211> 353

<212> PRT

<213> Homo sapiens

<400> 367

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Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1             5             10             15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
      20             25             30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
      35             40             45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
      50             55             60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
      65             70             75             80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
      85             90             95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
      100            105            110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
      115            120            125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
      130            135            140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
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cacatagtag ggtgcgagc acacaaagaa gacc

34

<210> 370

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 370

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atcatcatgc cttcgggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttgc cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
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cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
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tatgccagac tcatcccttt cccaggagggt gcagtgggct gcggcatacg cctgcccaac 600
ccagacactg acctctactg gttcaccctg taccagtttt tcctggcctt tgccctgcct 660
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cccgcctccc agcgcagcat ccggctgcgg acaaagaggg tgaccgcgac agccatcgcc 780
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tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062
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<210> 371

<211> 353

<212> PRT

<213> Homo sapiens

<400> 371

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Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1             5             10             15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
 20             25             30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35             40             45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50             55             60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65             70             75             80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
 85             90             95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100             105             110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
```

115	120	125
Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala		
130	135	140
Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala		
145	150	155
Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr		
	165	170
Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val		
	180	185
Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe		
	195	200
Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile		
	210	215
Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala		
	225	230
Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg		
	245	250
Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Cys Ala Pro Tyr		
	260	265
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr		
	275	280
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser		
	290	300
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys		
	305	315
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala		
	325	330
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly		
	340	345
Thr		350

<210> 372
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 372
 ggtcttcttt gtgtgcttcg caccctacta tgtg

<210> 373
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 373
 cacatagtag ggtgcgaagc acacaaagaa gacc

34

<210> 374
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 374
 atggacctgg aagcctcgct gctgcccact ggtcccaatg ccagcaaacac ctctgatggc 60
 cccgataaacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
 atcatcatgc ctctcggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
 gtcattcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
 ttcatcatca acctctcggt agtagatctc ctctttctcc tgggcatgcc cttcatgatc 300
 caccagctca tgggcaatgg ggtgtggcac ttitggggaga ccatgtgcac cctcatcacg 360
 gccatggatg ccaatagtca gtccaccagc acctacatcc tgaccgccat ggccattgac 420
 cgctacctgg cactgtcca ccccatctct tcacgaagt tccggaagcc ctctgtggcc 480
 accctggtga tctgcctcct gtgggcccctc tcttcatca gcatcacccc tgtgtggctg 540
 tatgccagac tcatcccctt cccaggaggt gcagtgggct gcggcatacg cctgcccac 600
 ccagacactg acctctactg gtccaccctg taccagtttt tccctggcctt tgccctgcct 660
 tttgtggtca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcatgtggc 720
 cccgcctccc agcgcagcat ccggtgcgg acaaagaggg tgaccgcac agccatcgcc 780
 atctgtctgg tcttctttgt gtgcttcgca cctactatg tgctacagct gaccagttg 840
 tccatcagcc gccgcaccct cactttgtc tacttataca atgcggccat cagcttgggc 900
 tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
 cgcttggtcc tgtcggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
 cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 375
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 375
 Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1 5 10 15
 Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
 20 25 30
 Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
 35 40 45
 Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
 50 55 60
 Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
 65 70 75 80
 Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met

<213> Homo sapiens

<400> 376

ggtcttcttt gtgtgcttgg caccctacta tgtg

34

<210> 377

<211> 34

<212> DNA

<213> Homo sapiens

<400> 377

cacatagtag ggtgccaagc acacaaagaa gacc

34

<210> 378

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 378

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cccgataacc tcaacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcgggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgac 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gtaccaccgc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccaactgtcca ccccatctct tccacgaagt tccggaagcc ctctgtggcc 480
accctggtga tctgcctcct gtggggccctc tccctcatca gcatcacccc tgtgtggctg 540
tatgccagac tcatcccctt cccaggagggt gcagtgggct gcggcatacg cctgccaac 600
ccagacactg acctctactg gttcacccctg taccagtttt tcctggcctt tgccctgcct 660
tttgtgtgca tcacagccgc atacgtgagg atcctgcagc gcatgacgtc ctcagtggcc 720
cccgctccc agcgagcat ccggctgcgg acaaagaggg tgaccgcac agccatcgcc 780
atctgtctgg tcttctttgt gtgcttgga cctactatg tgctacagct gaccagttg 840
tccatcagcc gcccgaccct cacctttgtc tacttataca atgcggccat cagcttgggc 900
tatgccaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaaa 960
cgcttggtcc tgtcggtgaa gctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 379

<211> 353

<212> PRT

<213> Homo sapiens

<400> 379

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala

[illegible]

<210> 380
 <211> 31
 <212> DNA
 <213> Homo sapiens

<400> 380
 gccatctgtc tggatcatctt tgtgtgctgg g 31

<210> 381
 <211> 31
 <212> DNA
 <213> Homo sapiens

<400> 381
 cccagcacac aaagatgacc agacagatgg c 31

<210> 382
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 382
 atggacctgg aagcctcgt gctgcccact ggtcccactg ccagcaacac ctctgatggc 60
 cccgataacc tcaattcggc aggatcacct cctcgccacgg ggagcatctc ctacatcaac 120
 atcatcatgc cttcgggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
 gtcattcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
 ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgatc 300
 caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
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 tatgccaaaca gctgcctcaa cccctttgtg tacatcgtgc tctgtgagac gttccgcaa 960
 cgcttgggtc tgtcgggtgaa gcctgcagcc caggggcagc ttgcgctgt cagcaacgct 1020
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<210> 383
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 383
 Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1 5 10 15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg

325

330

335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340 345 350

Thr

<210> 384

<211> 36

<212> DNA

<213> Homo sapiens

<400> 384

cgcacagcca tcgcccagtg tctgggtcttc tttgtg

36

<210> 385

<211> 36

<212> DNA

<213> Homo sapiens

<400> 385

cacaaagaag accagacact gggcgatggc tgtgcg

36

<210> 386

<211> 1062

<212> DNA

<213> Homo sapiens

<400> 386

atggacctgg aagcctcgct gctgcccaact ggtcccaatg ccagcaacac ctctgatggc 60
cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcgggtgtt cggcaccatc tgctctctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
ttcatcatca acctctcggg agtagatctc ctctttctcc tgggcatgcc cttcatgatc 300
caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
gccatggatg ccaatagtca gttcaccagc acctacatcc tgaccgccat ggccattgac 420
cgctacctgg ccactgtcca ccccatctct tcacgaagt tccggaagcc ctctgtggcc 480
accctgggtga tctgctcctt gtggggccctc tccttcatca gcatcaccac tgtgtggctg 540
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cagtgtctgg tcttctttgt gtgctgggca ccctactatg tgctacagct gaccagttg 840
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cgcttgggtc tgtcgggtgaa gcctgcagcc caggggcagc ttgcgctgtg cagcaacgct 1020
cagacggctg acgaggagag gacagaaagc aaaggcacct ga 1062

<210> 387

<211> 353

<212> PRT

<213> Homo sapiens

<400> 387

Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
1 5 10 15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
20 25 30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
35 40 45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
50 55 60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
65 70 75 80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
85 90 95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
100 105 110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
115 120 125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asp Arg Tyr Leu Ala
130 135 140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
145 150 155 160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
165 170 175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
180 185 190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
195 200 205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
210 215 220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
225 230 235 240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
245 250 255

Thr Ala Ile Ala Gln Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr
260 265 270

Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr
275 280 285

Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser

608660-040501

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290                295                300
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys
305                310                315                320

Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala
325                330                335

Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly
340                345                350

Thr

<210> 388
<211> 33
<212> DNA
<213> Homo sapiens

<400> 388
accgccatgg ccattaacgc gtacctggcc act 33

<210> 389
<211> 33
<212> DNA
<213> Homo sapiens

<400> 389
agtggccagg tagcgggtaa tggccatggc ggt 33

<210> 390
<211> 1062
<212> DNA
<213> Homo sapiens

<400> 390
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cccgataacc tcacttcggc aggatcacct cctcgcacgg ggagcatctc ctacatcaac 120
atcatcatgc cttcggtgtt cggcaccatc tgcctcctgg gcatcatcgg gaactccacg 180
gtcatcttcg cggtcgtgaa gaagtccaag ctgcactggg gcaacaacgt ccccgacatc 240
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caccagctca tgggcaatgg ggtgtggcac tttggggaga ccatgtgcac cctcatcacg 360
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tatgccagac tcatcccctt cccaggaggt gcagtgggct ggggcatacg cctgcccac 600
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cgcttgggtc tgtcgggtgaa gcctgcagcc caggggcagc ttcgcgctgt cagcaacgct 1020
cagacggctg acgaggagag gacagaaaagc aaaggcacct ga 1062

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<210> 391
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 391

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Met Asp Leu Glu Ala Ser Leu Leu Pro Thr Gly Pro Asn Ala Ser Asn
 1          5          10          15

Thr Ser Asp Gly Pro Asp Asn Leu Thr Ser Ala Gly Ser Pro Pro Arg
          20          25          30

Thr Gly Ser Ile Ser Tyr Ile Asn Ile Ile Met Pro Ser Val Phe Gly
          35          40          45

Thr Ile Cys Leu Leu Gly Ile Ile Gly Asn Ser Thr Val Ile Phe Ala
          50          55          60

Val Val Lys Lys Ser Lys Leu His Trp Cys Asn Asn Val Pro Asp Ile
          65          70          75          80

Phe Ile Ile Asn Leu Ser Val Val Asp Leu Leu Phe Leu Leu Gly Met
          85          90          95

Pro Phe Met Ile His Gln Leu Met Gly Asn Gly Val Trp His Phe Gly
          100          105          110

Glu Thr Met Cys Thr Leu Ile Thr Ala Met Asp Ala Asn Ser Gln Phe
          115          120          125

Thr Ser Thr Tyr Ile Leu Thr Ala Met Ala Ile Asn Arg Tyr Leu Ala
          130          135          140

Thr Val His Pro Ile Ser Ser Thr Lys Phe Arg Lys Pro Ser Val Ala
          145          150          155          160

Thr Leu Val Ile Cys Leu Leu Trp Ala Leu Ser Phe Ile Ser Ile Thr
          165          170          175

Pro Val Trp Leu Tyr Ala Arg Leu Ile Pro Phe Pro Gly Gly Ala Val
          180          185          190

Gly Cys Gly Ile Arg Leu Pro Asn Pro Asp Thr Asp Leu Tyr Trp Phe
          195          200          205

Thr Leu Tyr Gln Phe Phe Leu Ala Phe Ala Leu Pro Phe Val Val Ile
          210          215          220

Thr Ala Ala Tyr Val Arg Ile Leu Gln Arg Met Thr Ser Ser Val Ala
          225          230          235          240

Pro Ala Ser Gln Arg Ser Ile Arg Leu Arg Thr Lys Arg Val Thr Arg
          245          250          255

Thr Ala Ile Ala Ile Cys Leu Val Phe Phe Val Cys Trp Ala Pro Tyr

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	260		265		270
Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr					
275		280		285	
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser					
290		295		300	
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys					
305		310		315	320
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala					
	325		330		335
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly					
	340		345		350

Thr

<210> 392
 <211> 32
 <212> DNA
 <213> Homo sapiens
 <400> 392
 caagcgagtt atcggcatat acgctgacgg tc 32

<210> 393
 <211> 32
 <212> DNA
 <213> Homo sapiens
 <400> 393
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<210> 394
 <211> 2292
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 tgcaaggata ttcaacgcat cccagctta ccgccagta cgcagactct gaagcttatt 180
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 gccctcaaag agtccccct cctaaagtgc cttggcattt tcaacactgg acttaaaatg 420
 ttccctgacc tgaccaaagt ttattccact gatatatctt ttatacttga aattacagac 480
 aacccttaca tgacgtcaat ccctgtgaat gcttttcagg gactatgcaa tgaaaccttg 540
 aactgaagc tgtacaacaa cggctttact tcagtccaag gatatgcttt caatgggaca 600
 aagctggatg ctgtttacct aaacaagaat aaatacctga cagttattga caaagatgca 660
 tttggaggag tatacagtgg accaagcttg ctggacgtgt ctcaaaccag tgtcactgcc 720

725

730

735

Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln
 740 745 750

Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu
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<210> 396

<211> 31

<212> DNA

<213> Homo sapiens

<400> 396

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31

<210> 397

<211> 31

<212> DNA

<213> Homo sapiens

<400> 397

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31

<210> 398

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 398

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<210> 399

<211> 764

<212> PRT

<213> Homo sapiens

<400> 399

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 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60
 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125
 Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140
 Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160
 Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
 165 170 175
 Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val

180	185	190
Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn		
195	200	205
Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val		
210	215	220
Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala		
225	230	235
Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn		
	245	250
Thr Trp Thr Leu Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu		
	260	265
Thr Arg Ala Asp Leu Ser Tyr Pro Ser His Cys Cys Ala Phe Lys Asn		
	275	280
Gln Lys Lys Ile Arg Gly Ile Leu Glu Ser Leu Met Cys Asn Glu Ser		
	290	295
Ser Met Gln Ser Leu Arg Gln Arg Lys Ser Val Asn Ala Leu Asn Ser		
305	310	315
Pro Leu His Gln Glu Tyr Glu Glu Asn Leu Gly Asp Ser Ile Val Gly		
	325	330
Tyr Lys Glu Lys Ser Lys Phe Gln Asp Thr His Asn Asn Ala His Tyr		
	340	345
Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe Gly Gln		
	355	360
Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp Ser His		
	370	375
Tyr Asp Tyr Thr Ile Cys Gly Asp Ser Glu Asp Met Val Cys Thr Pro		
385	390	395
Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Lys Phe		
	405	410
Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu Gly Asn		
	420	425
Val Phe Val Leu Leu Ile Leu Leu Thr Ser His Tyr Lys Leu Asn Val		
	435	440
Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys Met Gly		
	450	455
Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr His Ser Glu		
465	470	475
Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr		

Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu	485	490	495
500	505	510	
Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Arg	515	520	525
Leu Asp Arg Lys Ile Arg Leu Arg His Ala Cys Ala Ile Met Val Gly	530	535	540
Gly Trp Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val Gly Ile	545	550	555
560			
Ser Ser Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr Glu Thr	565	570	575
Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val	580	585	590
Ala Phe Val Ile Val Cys Cys Cys Tyr Val Lys Ile Tyr Ile Thr Val	595	600	605
Arg Asn Pro Gln Tyr Asn Pro Gly Asp Lys Gly Thr Lys Ile Ala Lys	610	615	620
Arg Met Ala Val Leu Ile Phe Thr Asp Phe Ile Cys Met Ala Pro Ile	625	630	635
640			
Ser Phe Tyr Ala Leu Ser Ala Ile Leu Asn Lys Pro Leu Ile Thr Val	645	650	655
Ser Asn Ser Lys Ile Leu Leu Val Leu Phe Tyr Pro Leu Asn Ser Cys	660	665	670
Ala Asn Pro Phe Leu Tyr Ala Ile Phe Thr Lys Ala Phe Gln Arg Asp	675	680	685
Val Phe Ile Leu Leu Ser Lys Phe Gly Ile Cys Lys Arg Gln Ala Gln	690	695	700
Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln	705	710	715
720			
Val Gln Lys Val Thr His Glu Met Arg Gln Gly Leu His Asn Met Glu	725	730	735
Asp Val Tyr Glu Leu Ile Glu Lys Ser His Leu Thr Pro Lys Lys Gln	740	745	750
Gly Gln Ile Ser Glu Glu Tyr Met Gln Thr Val Leu	755	760	

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 <211> 32
 <212> DNA

<213> Homo sapiens

<400> 400

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32

<210> 401

<211> 32

<212> DNA

<213> Homo sapiens

<400> 401

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32

<210> 402

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 402

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tgcaaggata ttcaacgcat cccagctta ccgcccagta cgcagactct gaagcttatt 180
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<210> 403
 <211> 764
 <212> PRT
 <213> Homo sapiens

<400> 403
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 35 40 45
 Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
 50 55 60
 Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
 65 70 75 80
 Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
 85 90 95
 Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100 105 110
 Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115 120 125
 Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130 135 140
 Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145 150 155 160
 Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
 165 170 175
 Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
 180 185 190
 Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn
 195 200 205
 Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val
 210 215 220
 Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala
 225 230 235 240
 Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn

245							250							255	
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Thr	Arg	Ala 275	Asp	Leu	Ser	Tyr	Pro 280	Ser	His	Cys	Cys	Ala 285	Phe	Lys	Asn
Gln	Lys 290	Lys	Ile	Arg	Gly	Ile 295	Leu	Glu	Ser	Leu	Met 300	Cys	Asn	Glu	Ser
Ser 305	Met	Gln	Ser	Leu	Arg 310	Gln	Arg	Lys	Ser	Val 315	Asn	Ala	Leu	Asn	Ser 320
Pro	Leu	His	Gln	Glu 325	Tyr	Glu	Glu	Asn 330	Leu	Gly	Asp	Ser	Ile 335	Val	Gly
Tyr	Lys	Glu	Lys 340	Ser	Lys	Phe	Gln	Asp 345	Thr	His	Asn	Asn	Ala 350	His	Tyr
Tyr	Val	Phe 355	Phe	Glu	Glu	Gln	Glu 360	Asp	Glu	Ile	Ile	Gly 365	Phe	Gly	Gln
Glu 370	Leu	Lys	Asn	Pro	Gln	Glu 375	Glu	Thr	Leu	Gln	Ala 380	Phe	Asp	Ser	His
Tyr 385	Asp	Tyr	Thr	Ile	Cys 390	Gly	Asp	Ser	Glu	Asp 395	Met	Val	Cys	Thr	Pro 400
Lys	Ser	Asp	Glu	Phe 405	Asn	Pro	Cys	Glu	Asp 410	Ile	Met	Gly	Tyr	Lys 415	Phe
Leu	Arg	Ile	Val 420	Val	Trp	Phe	Val	Ser 425	Leu	Leu	Ala	Leu	Leu 430	Gly	Asn
Val	Phe 435	Val	Leu	Leu	Ile	Leu	Leu 440	Thr	Ser	His	Tyr	Lys 445	Leu	Asn	Val
Pro	Arg 450	Phe	Leu	Met	Cys	Asn 455	Leu	Ala	Phe	Ala	Asp 460	Phe	Cys	Met	Gly
Met 465	Tyr	Leu	Leu	Leu	Ile 470	Ala	Ser	Val	Asp	Leu 475	Tyr	Thr	His	Ser	Glu 480
Tyr	Tyr	Asn	His 485	Ala	Ile	Asp	Trp	Gln	Thr 490	Gly	Pro	Gly	Cys	Asn 495	Thr
Ala	Gly	Phe	Phe 500	Thr	Val	Phe	Ala	Ser 505	Glu	Leu	Ser	Val	Tyr 510	Thr	Leu
Thr	Val 515	Ile	Thr	Leu	Glu	Arg	Trp 520	Tyr	Ala	Ile	Thr	Phe 525	Ala	Met	Arg
Leu	Asp 530	Arg	Lys	Ile	Arg	Leu 535	Arg	His	Ala	Cys	Ala 540	Ile	Met	Val	Gly
Gly	Trp	Val	Cys	Cys	Phe	Leu	Leu	Ala	Leu	Leu	Pro	Leu	Val	Gly	Ile

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33

<210> 406

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 406

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<210> 407

<211> 764

<212> PRT

<213> Homo sapiens

<400> 407

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Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro 35	40	45	
Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu 50	55	60	
Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg 65	70	75	80
Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser 85	90	95	
Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg 100	105	110	
Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu 115	120	125	
Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu 130	135	140	
Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp 145	150	155	160
Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys 165	170	175	
Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val 180	185	190	
Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn 195	200	205	
Lys Asn Lys Tyr Leu Thr Val Ile Asp Lys Asp Ala Phe Gly Gly Val 210	215	220	
Tyr Ser Gly Pro Ser Leu Leu Asp Val Ser Gln Thr Ser Val Thr Ala 225	230	235	240
Leu Pro Ser Lys Gly Leu Glu His Leu Lys Glu Leu Ile Ala Arg Asn 245	250	255	
Thr Trp Thr Leu Lys Lys Leu Pro Leu Ser Leu Ser Phe Leu His Leu 260	265	270	
Thr Arg Ala Asp Leu Ser Tyr Pro Ser His Cys Cys Ala Phe Lys Asn 275	280	285	
Gln Lys Lys Ile Arg Gly Ile Leu Glu Ser Leu Met Cys Asn Glu Ser 290	295	300	
Ser Met Gln Ser Leu Arg Gln Arg Lys Ser Val Asn Ala Leu Asn Ser			

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Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr		
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Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His		
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Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro		
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Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val		
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Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly		
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Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu		
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Gly	Trp	Val	Cys	Cys	Phe	Leu	Leu	Ala	Leu	Leu	Pro	Leu	Val	Gly	Ile		
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Phe	Tyr	Asn	Leu	Ser	Lys	Val	Thr	His	Ile	Glu	Ile	Arg	Asn	Thr	Arg	
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Lys	Phe	Leu	Gly	Ile	Phe	Asn	Thr	Gly	Leu	Lys	Met	Phe	Pro	Asp	Leu	
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Thr	Lys	Val	Tyr	Ser	Thr	Asp	Ile	Phe	Phe	Ile	Leu	Glu	Ile	Thr	Asp	
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Asn	Pro	Tyr	Met	Thr	Ser	Ile	Pro	Val	Asn	Ala	Phe	Gln	Gly	Leu	Cys	
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Asn	Glu	Thr	Leu	Thr	Leu	Lys	Leu	Tyr	Asn	Asn	Gly	Phe	Thr	Ser	Val	
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Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn	
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Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val	
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Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn	
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Val	Phe 435	Val	Leu	Leu	Ile	Leu	Leu 440	Thr	Ser	His	Tyr 445	Lys	Leu	Asn	Val
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Gly 545	Trp	Val	Cys	Cys	Phe 550	Leu	Leu	Ala	Leu	Leu 555	Pro	Leu	Val	Gly	Ile 560
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Arg 625	Met	Ala	Val	Leu	Ile 630	Phe	Thr	Asp	Phe	Ile 635	Cys	Met	Ala	Pro	Ile 640
Ser	Phe	Tyr	Ala	Leu 645	Ser	Ala	Ile	Leu	Asn 650	Lys	Pro	Leu	Ile	Thr	Val 655
Ser	Asn	Ser	Lys 660	Ile	Leu	Leu	Val	Leu 665	Phe	Tyr	Pro	Leu	Asn 670	Ser	Tyr
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Val Gln Lys Val Thr His Glu Met Arg Gln Gly Leu His Asn Met Glu		
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			20					25					30		
Gln	Glu	Glu	Asp	Phe	Arg	Val	Thr	Cys	Lys	Asp	Ile	Gln	Arg	Ile	Pro
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Ser	Leu	Pro	Pro	Ser	Thr	Gln	Thr	Leu	Lys	Leu	Ile	Glu	Thr	His	Leu
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Arg	Thr	Ile	Pro	Ser	His	Ala	Phe	Ser	Asn	Leu	Pro	Asn	Ile	Ser	Arg
			65			70				75					80
Ile	Tyr	Val	Ser	Ile	Asp	Val	Thr	Leu	Gln	Gln	Leu	Glu	Ser	His	Ser
				85					90					95	
Phe	Tyr	Asn	Leu	Ser	Lys	Val	Thr	His	Ile	Glu	Ile	Arg	Asn	Thr	Arg
			100					105					110		
Asn	Leu	Thr	Tyr	Ile	Asp	Pro	Asp	Ala	Leu	Lys	Glu	Leu	Pro	Leu	Leu
			115				120					125			
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Asn	Pro	Tyr	Met	Thr 165	Ser	Ile	Pro	Val	Asn	Ala 170	Phe	Gln	Gly	Leu	Cys 175
Asn	Glu	Thr	Leu 180	Thr	Leu	Lys	Leu	Tyr 185	Asn	Asn	Gly	Phe	Thr 190	Ser	Val
Gln	Gly	Tyr 195	Ala	Phe	Asn	Gly	Thr 200	Lys	Leu	Asp	Ala	Val 205	Tyr	Leu	Asn
Lys	Asn 210	Lys	Tyr	Leu	Thr	Val 215	Ile	Asp	Lys	Asp	Ala 220	Phe	Gly	Gly	Val
Tyr 225	Ser	Gly	Pro	Ser	Leu 230	Leu	Asp	Val	Ser	Gln 235	Thr	Ser	Val	Thr	Ala 240
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Gln	Lys 290	Lys	Ile	Arg	Gly	Ile 295	Leu	Glu	Ser	Leu	Met 300	Cys	Asn	Glu	Ser
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Pro	Leu	His	Gln	Glu 325	Tyr	Glu	Glu	Asn	Leu 330	Gly	Asp	Ser	Ile	Val 335	Gly
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Lys	Ser	Asp	Glu	Phe 405	Asn	Pro	Cys	Glu	Asp 410	Ile	Met	Gly	Tyr	Lys 415	Phe
Leu	Arg	Ile	Val 420	Val	Trp	Phe	Val	Ser 425	Leu	Leu	Ala	Leu	Leu 430	Gly	Asn
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val

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Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr				485					490							495			
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Pro Leu Ala Leu Ala Tyr Ile Val Phe Val Leu Thr Leu Asn Ile Val				580				585							590				
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Ala Tyr Arg Gly Gln Arg Val Pro Pro Lys Asn Ser Thr Asp Ile Gln					710					715									720
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745

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<210> 419
 <211> 764
 <212> PRT
 <213> Homo sapiens

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<400> 419
Met Arg Pro Ala Asp Leu Leu Gln Leu Val Leu Leu Leu Asp Leu Pro
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Arg Asp Leu Gly Gly Met Gly Cys Ser Ser Pro Pro Cys Glu Cys His
          20             25             30

Gln Glu Glu Asp Phe Arg Val Thr Cys Lys Asp Ile Gln Arg Ile Pro
      35             40             45

Ser Leu Pro Pro Ser Thr Gln Thr Leu Lys Leu Ile Glu Thr His Leu
  50             55             60

Arg Thr Ile Pro Ser His Ala Phe Ser Asn Leu Pro Asn Ile Ser Arg
  65             70             75             80

Ile Tyr Val Ser Ile Asp Val Thr Leu Gln Gln Leu Glu Ser His Ser
          85             90             95

Phe Tyr Asn Leu Ser Lys Val Thr His Ile Glu Ile Arg Asn Thr Arg
 100             105             110

Asn Leu Thr Tyr Ile Asp Pro Asp Ala Leu Lys Glu Leu Pro Leu Leu
 115             120             125

Lys Phe Leu Gly Ile Phe Asn Thr Gly Leu Lys Met Phe Pro Asp Leu
 130             135             140

Thr Lys Val Tyr Ser Thr Asp Ile Phe Phe Ile Leu Glu Ile Thr Asp
 145             150             155             160

Asn Pro Tyr Met Thr Ser Ile Pro Val Asn Ala Phe Gln Gly Leu Cys
          165             170             175

Asn Glu Thr Leu Thr Leu Lys Leu Tyr Asn Asn Gly Phe Thr Ser Val
 180             185             190

Gln Gly Tyr Ala Phe Asn Gly Thr Lys Leu Asp Ala Val Tyr Leu Asn

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	195					200					205				
Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val
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Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala
225					230					235					240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn
				245					250					255	
Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu
			260					265					270		
Thr	Arg	Ala	Asp	Leu	Ser	Tyr	Pro	Ser	His	Cys	Cys	Ala	Phe	Lys	Asn
		275					280					285			
Gln	Lys	Lys	Ile	Arg	Gly	Ile	Leu	Glu	Ser	Leu	Met	Cys	Asn	Glu	Ser
	290					295					300				
Ser	Met	Gln	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Val	Asn	Ala	Leu	Asn	Ser
305					310					315					320
Pro	Leu	His	Gln	Glu	Tyr	Glu	Glu	Asn	Leu	Gly	Asp	Ser	Ile	Val	Gly
				325					330					335	
Tyr	Lys	Glu	Lys	Ser	Lys	Phe	Gln	Asp	Thr	His	Asn	Asn	Ala	His	Tyr
			340					345					350		
Tyr	Val	Phe	Phe	Glu	Glu	Gln	Glu	Asp	Glu	Ile	Ile	Gly	Phe	Gly	Gln
		355					360					365			
Glu	Leu	Lys	Asn	Pro	Gln	Glu	Glu	Thr	Leu	Gln	Ala	Phe	Asp	Ser	His
	370					375					380				
Tyr	Asp	Tyr	Thr	Ile	Cys	Gly	Asp	Ser	Glu	Asp	Met	Val	Cys	Thr	Pro
385					390					395					400
Lys	Ser	Asp	Glu	Phe	Asn	Pro	Cys	Glu	Asp	Ile	Met	Gly	Tyr	Lys	Phe
				405					410					415	
Leu	Arg	Ile	Val	Val	Trp	Phe	Val	Ser	Leu	Leu	Ala	Leu	Leu	Gly	Asn
			420					425					430		
Val	Phe	Val	Leu	Leu	Ile	Leu	Leu	Thr	Ser	His	Tyr	Lys	Leu	Asn	Val
		435					440					445			
Pro	Arg	Phe	Leu	Met	Cys	Asn	Leu	Ala	Phe	Ala	Asp	Phe	Cys	Met	Gly
		450				455					460				
Met	Tyr	Leu	Leu	Leu	Ile	Ala	Ser	Val	Asp	Leu	Tyr	Thr	His	Ser	Glu
465					470					475					480
Tyr	Tyr	Asn	His	Ala	Ile	Asp	Trp	Gln	Thr	Gly	Pro	Gly	Cys	Asn	Thr
				485					490					495	
Ala	Gly	Phe	Phe	Thr	Val	Phe	Ala	Ser	Glu	Leu	Ser	Ala	Tyr	Thr	Leu

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Thr	Val	Ile	Thr	Leu	Glu	Arg	Trp	Tyr	Ala	Ile	Thr	Phe	Ala	Met	Arg
515					520					525					
Leu	Asp	Arg	Lys	Ile	Arg	Leu	Arg	His	Ala	Cys	Ala	Ile	Met	Val	Gly
530					535					540					
Gly	Trp	Val	Cys	Cys	Phe	Leu	Leu	Ala	Leu	Leu	Pro	Leu	Val	Gly	Ile
545					550					555					
Ser	Ser	Tyr	Ala	Lys	Val	Ser	Ile	Cys	Leu	Pro	Met	Asp	Thr	Glu	Thr
565					570					575					
Pro	Leu	Ala	Leu	Ala	Tyr	Ile	Val	Phe	Val	Leu	Thr	Leu	Asn	Ile	Val
580					585					590					
Ala	Phe	Val	Ile	Val	Cys	Cys	Cys	Tyr	Val	Lys	Ile	Tyr	Ile	Thr	Val
595					600					605					
Arg	Asn	Pro	Gln	Tyr	Asn	Pro	Gly	Asp	Lys	Asp	Thr	Lys	Ile	Ala	Lys
610					615					620					
Arg	Met	Ala	Val	Leu	Ile	Phe	Thr	Asp	Phe	Ile	Cys	Met	Ala	Pro	Ile
625					630					635					
Ser	Phe	Tyr	Ala	Leu	Ser	Ala	Ile	Leu	Asn	Lys	Pro	Leu	Ile	Thr	Val
645					650					655					
Ser	Asn	Ser	Lys	Ile	Leu	Leu	Val	Leu	Phe	Tyr	Pro	Leu	Asn	Ser	Tyr
660					665					670					
Ala	Asn	Pro	Phe	Leu	Tyr	Ala	Ile	Phe	Thr	Lys	Ala	Phe	Gln	Arg	Asp
675					680					685					
Val	Phe	Ile	Leu	Leu	Ser	Lys	Phe	Gly	Ile	Cys	Lys	Arg	Gln	Ala	Gln
690					695					700					
Ala	Tyr	Arg	Gly	Gln	Arg	Val	Pro	Pro	Lys	Asn	Ser	Thr	Asp	Ile	Gln
705					710					715					
Val	Gln	Lys	Val	Thr	His	Glu	Met	Arg	Gln	Gly	Leu	His	Asn	Met	Glu
725					730					735					
Asp	Val	Tyr	Glu	Leu	Ile	Glu	Lys	Ser	His	Leu	Thr	Pro	Lys	Lys	Gln
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Gly	Gln	Ile	Ser	Glu	Glu	Tyr	Met	Gln	Thr	Val	Leu				
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<210> 420
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 <212> DNA
 <213> Homo sapiens

<400> 420

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33

<210> 421

<211> 33

<212> DNA

<213> Homo sapiens

<400> 421

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33

<210> 422

<211> 2292

<212> DNA

<213> Homo sapiens

<400> 422

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tgcaaggata ttcaacgcat cccagctta cgcgccagta cgcagactct gaagcttatt 180
gagactcacc tgagaactat tccaagtcac gcatcttcta atctgcccac tatttccaga 240
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<210> 423
 <211> 764
 <212> PRT
 <213> Homo sapiens

<400> 423

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Arg	Asp	Leu	Gly	Gly	Met	Gly	Cys	Ser	Ser	Pro	Pro	Cys	Glu	Cys	His
			20				25						30		
Gln	Glu	Glu	Asp	Phe	Arg	Val	Thr	Cys	Lys	Asp	Ile	Gln	Arg	Ile	Pro
			35				40					45			
Ser	Leu	Pro	Pro	Ser	Thr	Gln	Thr	Leu	Lys	Leu	Ile	Glu	Thr	His	Leu
	50					55					60				
Arg	Thr	Ile	Pro	Ser	His	Ala	Phe	Ser	Asn	Leu	Pro	Asn	Ile	Ser	Arg
	65				70					75					80
Ile	Tyr	Val	Ser	Ile	Asp	Val	Thr	Leu	Gln	Gln	Leu	Glu	Ser	His	Ser
				85					90					95	
Phe	Tyr	Asn	Leu	Ser	Lys	Val	Thr	His	Ile	Glu	Ile	Arg	Asn	Thr	Arg
			100					105					110		
Asn	Leu	Thr	Tyr	Ile	Asp	Pro	Asp	Ala	Leu	Lys	Glu	Leu	Pro	Leu	Leu
		115					120					125			
Lys	Phe	Leu	Gly	Ile	Phe	Asn	Thr	Gly	Leu	Lys	Met	Phe	Pro	Asp	Leu
	130					135					140				
Thr	Lys	Val	Tyr	Ser	Thr	Asp	Ile	Phe	Phe	Ile	Leu	Glu	Ile	Thr	Asp
	145				150					155					160
Asn	Pro	Tyr	Met	Thr	Ser	Ile	Pro	Val	Asn	Ala	Phe	Gln	Gly	Leu	Cys
				165					170					175	
Asn	Glu	Thr	Leu	Thr	Leu	Lys	Leu	Tyr	Asn	Asn	Gly	Phe	Thr	Ser	Val
			180					185					190		
Gln	Gly	Tyr	Ala	Phe	Asn	Gly	Thr	Lys	Leu	Asp	Ala	Val	Tyr	Leu	Asn
			195				200					205			
Lys	Asn	Lys	Tyr	Leu	Thr	Val	Ile	Asp	Lys	Asp	Ala	Phe	Gly	Gly	Val
	210					215					220				
Tyr	Ser	Gly	Pro	Ser	Leu	Leu	Asp	Val	Ser	Gln	Thr	Ser	Val	Thr	Ala
	225				230					235					240
Leu	Pro	Ser	Lys	Gly	Leu	Glu	His	Leu	Lys	Glu	Leu	Ile	Ala	Arg	Asn
				245					250					255	
Thr	Trp	Thr	Leu	Lys	Lys	Leu	Pro	Leu	Ser	Leu	Ser	Phe	Leu	His	Leu

260	265	270
Thr Arg Ala Asp Leu Ser Tyr Pro Ser His Cys Cys Ala Phe Lys Asn		
275	280	285
Gln Lys Lys Ile Arg Gly Ile Leu Glu Ser Leu Met Cys Asn Glu Ser		
290	295	300
Ser Met Gln Ser Leu Arg Gln Arg Lys Ser Val Asn Ala Leu Asn Ser		
305	310	315
Pro Leu His Gln Glu Tyr Glu Glu Asn Leu Gly Asp Ser Ile Val Gly		
325	330	335
Tyr Lys Glu Lys Ser Lys Phe Gln Asp Thr His Asn Asn Ala His Tyr		
340	345	350
Tyr Val Phe Phe Glu Glu Gln Glu Asp Glu Ile Ile Gly Phe Gly Gln		
355	360	365
Glu Leu Lys Asn Pro Gln Glu Glu Thr Leu Gln Ala Phe Asp Ser His		
370	375	380
Tyr Asp Tyr Thr Ile Cys Gly Asp Ser Glu Asp Met Val Cys Thr Pro		
385	390	395
Lys Ser Asp Glu Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Lys Phe		
405	410	415
Leu Arg Ile Val Val Trp Phe Val Ser Leu Leu Ala Leu Leu Gly Asn		
420	425	430
Val Phe Val Leu Leu Ile Leu Leu Thr Ser His Tyr Lys Leu Asn Val		
435	440	445
Pro Arg Phe Leu Met Cys Asn Leu Ala Phe Ala Asp Phe Cys Met Gly		
450	455	460
Met Tyr Leu Leu Leu Ile Ala Ser Val Asp Leu Tyr Thr His Ser Glu		
465	470	475
Tyr Tyr Asn His Ala Ile Asp Trp Gln Thr Gly Pro Gly Cys Asn Thr		
485	490	495
Ala Gly Phe Phe Thr Val Phe Ala Ser Glu Leu Ser Ala Tyr Thr Leu		
500	505	510
Thr Val Ile Thr Leu Glu Arg Trp Tyr Ala Ile Thr Phe Ala Met Arg		
515	520	525
Leu Asp Arg Lys Ile Arg Leu Arg His Ala Cys Ala Ile Met Val Gly		
530	535	540
Gly Trp Val Cys Cys Phe Leu Leu Ala Leu Leu Pro Leu Val Gly Ile		
545	550	555
Ser Ser Tyr Ala Lys Val Ser Ile Cys Leu Pro Met Asp Thr Glu Thr		


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<210> 425
 <211> 421
 <212> PRT
 <213> Homo sapiens

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<400> 425
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Ala Pro Phe Glu Thr Gly Gly Asn Thr Thr Gly Ile Ser Asp Val Thr
      20              25              30

Val Ser Tyr Gln Val Ile Thr Ser Leu Leu Leu Gly Thr Leu Ile Phe
      35              40              45

Cys Ala Val Leu Gly Asn Ala Cys Val Val Ala Ala Ile Ala Leu Glu
      50              55              60

Arg Ser Leu Gln Asn Val Ala Asn Tyr Leu Ile Gly Ser Leu Ala Val
      65              70              75              80

Thr Asp Leu Met Val Ser Val Leu Val Leu Pro Met Ala Ala Leu Tyr
      85              90              95

Gln Val Leu Asn Lys Trp Thr Leu Gly Gln Val Thr Cys Asp Leu Phe
      100             105             110

Ile Ala Leu Asp Val Leu Cys Cys Thr Ser Ser Ile Leu His Leu Cys
      115             120             125

Ala Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Pro Ile Asp Tyr
      130             135             140

Val Asn Lys Arg Thr Pro Arg Pro Arg Ala Leu Ile Ser Leu Thr Trp
      145             150             155             160

Leu Ile Gly Phe Leu Ile Ser Ile Pro Pro Ile Leu Gly Trp Arg Thr
      165             170             175

Pro Glu Asp Arg Ser Asp Pro Asp Ala Cys Thr Ile Ser Lys Asp His
      180             185             190

Gly Tyr Thr Ile Tyr Ser Thr Phe Gly Ala Phe Tyr Ile Pro Leu Leu
      195             200             205

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Leu Met Leu Val Leu Tyr Gly Arg Ile Phe Arg Ala Ala Arg Phe Arg
 210 215 220

Ile Arg Lys Thr Val Lys Lys Val Glu Lys Thr Gly Ala Asp Thr Arg
 225 230 235 240

His Gly Ala Ser Pro Ala Pro Gln Pro Lys Lys Ser Val Asn Gly Glu
 245 250 255

Ser Gly Ser Arg Asn Trp Arg Leu Gly Val Glu Ser Lys Ala Gly Gly
 260 265 270

Ala Leu Cys Ala Asn Gly Ala Val Arg Gln Gly Asp Asp Gly Ala Ala
 275 280 285

Leu Glu Val Ile Glu Val His Arg Val Gly Asn Ser Lys Glu His Leu
 290 295 300

Pro Leu Pro Ser Glu Ala Gly Pro Thr Pro Cys Ala Pro Ala Ser Phe
 305 310 315 320

Glu Arg Lys Asn Glu Arg Asn Ala Glu Ala Lys Arg Lys Met Ala Leu
 325 330 335

Ala Arg Glu Arg Lys Thr Lys Lys Thr Leu Gly Ile Ile Met Gly Thr
 340 345 350

Phe Ile Leu Cys Trp Leu Pro Phe Phe Ile Val Ala Leu Val Leu Pro
 355 360 365

Phe Cys Glu Ser Ser Cys His Met Pro Thr Leu Leu Gly Ala Ile Ile
 370 375 380

Asn Trp Leu Gly Tyr Ser Asn Ser Leu Leu Asn Pro Val Ile Tyr Ala
 385 390 395 400

Tyr Phe Asn Lys Asp Phe Gln Asn Ala Phe Lys Lys Ile Ile Lys Cys
 405 410 415

Asn Phe Cys Arg Gln
 420

<210> 426
 <211> 1173
 <212> DNA
 <213> Homo sapiens

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 caggactcca tctccctacc ctggaaagta ctgctgggta tgctattggc gctcatcacc 180
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<210> 427

<211> 390

<212> PRT

<213> Homo sapiens

<400> 427

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      20              25              30

Cys Ser Ala Lys Asp Tyr Ile Tyr Gln Asp Ser Ile Ser Leu Pro Trp
      35              40              45

Lys Val Leu Leu Val Met Leu Leu Ala Leu Ile Thr Leu Ala Thr Thr
      50              55              60

Leu Ser Asn Ala Phe Val Ile Ala Thr Val Tyr Arg Thr Arg Lys Leu
      65              70              75              80

His Thr Pro Ala Asn Tyr Leu Ile Ala Ser Leu Ala Val Thr Asp Leu
      85              90              95

Leu Val Ser Ile Leu Val Met Pro Ile Ser Thr Met Tyr Thr Val Thr
      100              105              110

Gly Arg Trp Thr Leu Gly Gln Val Val Cys Asp Phe Trp Leu Ser Ser
      115              120              125

Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His Leu Cys Val Ile Ala
      130              135              140

Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Val Glu Tyr Ser Ala Lys
      145              150              155              160

Arg Thr Pro Lys Arg Ala Ala Val Met Ile Ala Leu Val Trp Val Phe
      165              170              175

Ser Ile Ser Ile Ser Leu Pro Pro Phe Phe Trp Arg Gln Ala Lys Ala
      180              185              190

Glu Glu Glu Val Ser Glu Cys Val Val Asn Thr Asp His Ile Leu Tyr

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<210> 429

<211> 377

<212> PRT

<213> Homo sapiens

<400> 429

Met Ser Pro Leu Asn Gln Ser Ala Glu Gly Leu Pro Gln Glu Ala Ser
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20 25 30
Thr Leu Gln Ala Leu Lys Ile Ser Leu Ala Val Val Leu Ser Val Ile
35 40 45
Thr Leu Ala Thr Val Leu Ser Asn Ala Phe Val Leu Thr Thr Ile Leu
50 55 60
Leu Thr Arg Lys Leu His Thr Pro Ala Asn Tyr Leu Ile Gly Ser Leu
65 70 75 80
Ala Thr Thr Asp Leu Leu Val Ser Ile Leu Val Met Pro Ile Ser Ile
85 90 95
Ala Tyr Thr Ile Thr His Thr Trp Asn Phe Gly Gln Ile Leu Cys Asp
100 105 110
Ile Trp Leu Ser Ser Asp Ile Thr Cys Cys Thr Ala Ser Ile Leu His
115 120 125
Leu Cys Val Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asp Ala Leu
130 135 140
Glu Tyr Ser Lys Arg Arg Thr Ala Gly His Ala Ala Thr Met Ile Ala
145 150 155 160
Ile Val Trp Ala Ile Ser Ile Cys Ile Ser Ile Pro Pro Leu Phe Trp
165 170 175
Arg Gln Ala Lys Ala Gln Glu Glu Met Ser Asp Cys Leu Val Asn Thr
180 185 190
Ser Gln Ile Ser Tyr Thr Ile Tyr Ser Thr Cys Gly Ala Phe Tyr Ile
195 200 205
Pro Ser Val Leu Leu Ile Ile Leu Tyr Gly Arg Ile Tyr Arg Ala Ala
210 215 220

<210> 431
 <211> 365
 <212> PRT
 <213> Homo sapiens

<400> 431

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Met Asn Ile Thr Asn Cys Thr Thr Glu Ala Ser Met Ala Ile Arg Pro
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      20             25             30

Thr Thr Leu Thr Thr Leu Leu Asn Leu Ala Val Ile Met Ala Ile Gly
      35             40             45

Thr Thr Lys Lys Leu His Gln Pro Ala Asn Tyr Leu Ile Cys Ser Leu
      50             55             60

Ala Val Thr Asp Leu Leu Val Ala Val Leu Val Met Pro Leu Ser Ile
      65             70             75             80

Ile Tyr Ile Val Met Asp Arg Trp Lys Leu Gly Tyr Phe Leu Cys Glu
      85             90             95

Val Trp Leu Ser Val Asp Met Thr Cys Cys Thr Cys Ser Ile Leu His
      100            105            110

Leu Cys Val Ile Ala Leu Asp Arg Tyr Trp Ala Ile Thr Asn Ala Ile
      115            120            125

Glu Tyr Ala Arg Lys Arg Thr Ala Lys Arg Ala Ala Leu Met Ile Leu
      130            135            140

Thr Val Trp Thr Ile Ser Ile Phe Ile Ser Met Pro Pro Leu Phe Trp
      145            150            155            160

Arg Ser His Arg Arg Leu Ser Pro Pro Pro Ser Gln Cys Thr Ile Gln
      165            170            175

His Asp His Val Ile Tyr Thr Ile Tyr Ser Thr Leu Gly Ala Phe Tyr
      180            185            190

Ile Pro Leu Thr Leu Ile Leu Ile Leu Tyr Tyr Arg Ile Tyr His Ala
      195            200            205

Ala Lys Ser Leu Tyr Gln Lys Arg Gly Ser Ser Arg His Leu Ser Asn
      210            215            220

Arg Ser Thr Asp Ser Gln Asn Ser Phe Ala Ser Cys Lys Leu Thr Gln
      225            230            235            240

Thr Phe Cys Val Ser Asp Phe Ser Thr Ser Asp Pro Thr Thr Glu Phe
      245            250            255

Glu Lys Phe His Ala Ser Ile Arg Ile Pro Pro Phe Asp Asn Asp Leu
      260            265            270
  
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20				25				30							
Leu	Ala	Leu	Met	Thr	Thr	Thr	Ile	Asn	Ser	Leu	Val	Ile	Ala	Ala	Ile
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Leu	Ala	Val	Thr	Asp	Phe	Leu	Val	Ala	Val	Leu	Val	Met	Pro	Phe	Ser
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Asp	Ile	Trp	Leu	Ser	Val	Asp	Ile	Thr	Cys	Cys	Thr	Cys	Ser	Ile	Leu
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His	Leu	Ser	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Arg	Ala	Ile	Thr	Asp	Ala
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		130					135					140			
Thr	Ile	Val	Trp	Ile	Ile	Ser	Val	Phe	Ile	Ser	Met	Pro	Pro	Leu	Phe
		145					150					155			
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Asp	His	Ile	Val	Ser	Thr	Ile	Tyr	Ser	Thr	Phe	Gly	Ala	Phe	Tyr	Ile
			180					185					190		
Pro	Leu	Ala	Leu	Ile	Leu	Ile	Leu	Tyr	Tyr	Lys	Ile	Tyr	Arg	Ala	Ala
		195					200					205			
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		210					215					220			
Val	Asn	Gly	Gln	Val	Leu	Leu	Glu	Ser	Gly	Glu	Lys	Ser	Thr	Lys	Ser
		225					230					235			
Val	Ser	Thr	Ser	Tyr	Val	Leu	Glu	Lys	Ser	Leu	Ser	Asp	Pro	Ser	Thr
					245					250					255
Asp	Phe	Asp	Lys	Ile	His	Ser	Thr	Val	Arg	Ser	Leu	Arg	Ser	Glu	Phe
			260							265					270
Lys	His	Glu	Lys	Ser	Trp	Arg	Arg	Gln	Lys	Ile	Ser	Gly	Thr	Arg	Glu
		275					280					285			
Arg	Lys	Ala	Lys	Thr	Thr	Leu	Gly	Leu	Ile	Leu	Gly	Ala	Phe	Val	Ile
		290					295					300			
Cys	Trp	Leu	Pro	Phe	Phe	Val	Lys	Glu	Leu	Val	Val	Asn	Val	Cys	Asp
		305					310					315			
Lys	Cys	Lys	Ile	Ser	Glu	Glu	Met	Ser	Asn	Phe	Leu	Ala	Trp	Leu	Gly

325

330

335

Tyr Leu Asn Ser Leu Ile Asn Pro Leu Ile Tyr Thr Ile Phe Asn Glu
340 345 350

Asp Phe Lys Lys Ala Phe Gln Lys Leu Val Arg Cys Arg Cys
355 360 365

<210> 434

<211> 1446

<212> DNA

<213> Homo sapiens

<400> 434

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<210> 435

<211> 481

<212> PRT

<213> Homo sapiens

<400> 435

Met Ala Leu Ser Tyr Arg Val Ser Glu Leu Gln Ser Thr Ile Pro Glu
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His Ile Leu Gln Ser Thr Phe Val His Val Ile Ser Ser Asn Trp Ser
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Gly Leu Gln Thr Glu Ser Ile Pro Glu Glu Met Lys Gln Ile Val Glu
35 40 45

[illegible]

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<210> 437
<211> 1164
<212> DNA
<213> Homo sapiens
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<400> 437

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<210> 438

<211> 1167

<212> DNA

<213> Homo sapiens

<400> 438

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<210> 439

<211> 388

<212> PRT

<213> Homo sapiens

[illegible]

128

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Arg Ala Phe Leu Ile Ile Leu Cys Cys Asp Asp Glu Arg Tyr Arg Arg
 325 330 335

Pro Ser Ile Leu Gly Gln Thr Val Pro Cys Ser Thr Thr Thr Ile Asn
 340 345 350

Gly Ser Thr His Val Leu Arg Asp Ala Val Glu Cys Gly Gly Gln Trp
 355 360 365

Glu Ser Gln Cys His Pro Pro Ala Thr Ser Pro Leu Val Ala Ala Gln
 370 375 380

Pro Ser Asp Thr
 385

<210> 440
 <211> 1152
 <212> DNA
 <213> Homo sapiens

<400> 440
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<210> 441
 <211> 380
 <212> PRT
 <213> Homo sapiens

<400> 441
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Ala	Ile	Leu	Gly	Asn	Leu	Leu	Val	Met	Val	Ala	Val	Cys	Trp	Asp	Arg	35	40	45	
Gln	Leu	Arg	Lys	Ile	Lys	Thr	Asn	Tyr	Phe	Ile	Val	Ser	Leu	Ala	Phe	50	55	60	
Ala	Asp	Leu	Leu	Val	Ser	Val	Leu	Val	Met	Pro	Phe	Gly	Ala	Ile	Glu	65	70	75	80
Leu	Val	Gln	Asp	Ile	Trp	Ile	Tyr	Gly	Glu	Val	Phe	Cys	Leu	Val	Arg	85	90	95	
Thr	Ser	Leu	Asp	Val	Leu	Leu	Thr	Thr	Ala	Ser	Ile	Phe	His	Leu	Cys	100	105	110	
Cys	Ile	Ser	Leu	Asp	Arg	Tyr	Tyr	Ala	Ile	Cys	Cys	Gln	Pro	Leu	Val	115	120	125	
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly	130	135	140	
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly	145	150	155	160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn	165	170	175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr	180	185	190	
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met	195	200	205	
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His	210	215	220	
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro	225	230	235	240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys	245	250	255	
Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp	260	265	270	
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr	275	280	285	
Val	Pro	Gly	Gln	Val	Trp	Thr	Ala	Phe	Leu	Trp	Leu	Gly	Tyr	Ile	Asn	290	295	300	
Ser	Gly	Leu	Asn	Pro	Phe	Leu	Tyr	Ala	Phe	Leu	Asn	Lys	Ser	Phe	Arg	305	310	315	320

Arg Ala Phe Leu Ile Ile Leu Cys Cys Asp Asp Glu Arg Tyr Arg Arg
 325 330 335

Pro Ser Ile Leu Gly Gln Thr Val Pro Cys Ser Thr Thr Thr Ile Asn
 340 345 350

Gly Ser Thr His Val Leu Ser Ser Gly Thr Glu Thr Asp Arg Arg Asn
 355 360 365

Phe Gly Ile Arg Lys Arg Arg Leu Thr Lys Pro Ser
 370 375 380

<210> 442
 <211> 1083
 <212> DNA
 <213> Homo sapiens

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<210> 443
 <211> 360
 <212> PRT
 <213> Homo sapiens

<400> 443
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 20 25 30

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 35 40 45

Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60

<210> 444
 <211> 1137
 <212> DNA
 <213> Homo sapiens

<400> 444
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 ggctatatca attccgggtt gaaccctttt ctctacgcct tcttgaataa gtcttttaga 960
 cgtgccttcc tcatcatcct ctgctgtgat gatgagcgt accgaagacc ttccattctg 1020
 ggccagactg tcccttgctc aaccacaacc attaatggat ccacacatgt actaagtggc 1080
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<210> 445
 <211> 378
 <212> PRT
 <213> Homo sapiens

<400> 445
 Met Asp Lys Leu Asp Ala Asn Val Ser Ser Glu Glu Gly Phe Gly Ser
 1 5 10 15
 Val Glu Lys Val Val Leu Leu Thr Phe Leu Ser Thr Val Ile Leu Met
 20 25 30
 Ala Ile Leu Gly Asn Leu Leu Val Met Val Ala Val Cys Trp Asp Arg
 35 40 45
 Gln Leu Arg Lys Ile Lys Thr Asn Tyr Phe Ile Val Ser Leu Ala Phe
 50 55 60
 Ala Asp Leu Leu Val Ser Val Leu Val Met Pro Phe Gly Ala Ile Glu
 65 70 75 80
 Leu Val Gln Asp Ile Trp Ile Tyr Gly Glu Val Phe Cys Leu Val Arg
 85 90 95
 Thr Ser Leu Asp Val Leu Leu Thr Thr Ala Ser Ile Phe His Leu Cys
 100 105 110
 Cys Ile Ser Leu Asp Arg Tyr Tyr Ala Ile Cys Cys Gln Pro Leu Val

115					120					125					
Tyr	Arg	Asn	Lys	Met	Thr	Pro	Leu	Arg	Ile	Ala	Leu	Met	Leu	Gly	Gly
	130					135					140				
Cys	Trp	Val	Ile	Pro	Thr	Phe	Ile	Ser	Phe	Leu	Pro	Ile	Met	Gln	Gly
145					150					155					160
Trp	Asn	Asn	Ile	Gly	Ile	Ile	Asp	Leu	Ile	Glu	Lys	Arg	Lys	Phe	Asn
				165					170					175	
Gln	Asn	Ser	Asn	Ser	Thr	Tyr	Cys	Val	Phe	Met	Val	Asn	Lys	Pro	Tyr
			180					185					190		
Ala	Ile	Thr	Cys	Ser	Val	Val	Ala	Phe	Tyr	Ile	Pro	Phe	Leu	Leu	Met
		195					200					205			
Val	Leu	Ala	Tyr	Tyr	Arg	Ile	Tyr	Val	Thr	Ala	Lys	Glu	His	Ala	His
	210					215					220				
Gln	Ile	Gln	Met	Leu	Gln	Arg	Ala	Gly	Ala	Ser	Ser	Glu	Ser	Arg	Pro
225					230					235					240
Gln	Ser	Ala	Asp	Gln	His	Ser	Thr	His	Arg	Met	Arg	Thr	Glu	Thr	Lys
				245					250					255	
Ala	Lys	Lys	Thr	Leu	Cys	Ile	Ile	Met	Gly	Cys	Phe	Cys	Leu	Cys	Trp
			260					265					270		
Ala	Pro	Phe	Phe	Val	Thr	Asn	Ile	Val	Asp	Pro	Phe	Ile	Asp	Tyr	Thr
		275					280					285			
Val	Pro	Gly	Gln	Val	Trp	Thr	Ala	Phe	Leu	Trp	Leu	Gly	Tyr	Ile	Asn
	290					295					300				
Ser	Gly	Leu	Asn	Pro	Phe	Leu	Tyr	Ala	Phe	Leu	Asn	Lys	Ser	Phe	Arg
305					310					315					320
Arg	Ala	Phe	Leu	Ile	Ile	Leu	Cys	Cys	Asp	Asp	Glu	Arg	Tyr	Arg	Arg
				325					330					335	
Pro	Ser	Ile	Leu	Gly	Gln	Thr	Val	Pro	Cys	Ser	Thr	Thr	Thr	Ile	Asn
			340					345					350		
Gly	Ser	Thr	His	Val	Leu	Ser	Gly	Cys	Ser	Pro	Val	Ser	Ser	Phe	Leu
		355					360					365			
Leu	Leu	Phe	Cys	Asn	Arg	Pro	Val	Pro	Val						
	370					375									

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<210> 446
<211> 1074
<212> DNA
<213> Homo sapiens
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<400> 446

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gtgcttattc tcaccttgct gggctttctg gtggcgga cgttcgctg gaacctgctg 180
gtgctggcga ccatectccg tgtacgcacc ttccaccgag tgccccacaa cctgggtggca 240
tccatggccg tctcgatgt cctgggtggc ggcgtggtca tgccgctgag cctgggtgcat 300
gagctgtccg ggcgccgctg gcagctaggt cggaggctgt gccagctttg gatcgctgctg 360
gacgtgcttt gctgcacggc cagcatctgg aacgtgacgg ccatagccct ggaccgctac 420
tggtccatca cgcgccacat ggaatacacg ctccgcaccc gcaagtgcgt ctccaacgtc 480
atgatcgcg ctcacctgggc actctccgct gtcactctctc tggccccgct gctttttggc 540
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gccgtgttct ccaccgtagg cgccttctac ctgcccgtct gtgtggtgct cttcgtgtac 660
tggaagatct acaaggctgc caagtccgc gtgggtcca ggaagacaa tagcgtctca 720
cccatatccg aagctgtgga ggtgaaggac tctgccaaac agccccagat ggtgttcacg 780
gtccgccacg ccaccgtcac cttccagcca gaaggggaca cgtggcgga gcagaaggag 840
cagcgggcca agctcatggt gggcatcctc attggcgtgt tgcgtctctg ctggatcccc 900
ttctttctca ccgagctcat cagtccctc tgctcctgtg acatccccgc catctgaaa 960
agcatcttcc tgtggcttgg ctactccaac tccttcttta accccctgat ctatacggct 1020
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```

<210> 447
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 447

Met	Asp	Leu	Pro	Val	Asn	Leu	Thr	Ser	Phe	Ser	Leu	Ser	Thr	Pro	Ser
1				5					10					15	
Pro	Leu	Glu	Thr	Asn	His	Ser	Leu	Gly	Lys	Asp	Asp	Leu	Arg	Pro	Ser
			20					25					30		
Ser	Pro	Leu	Leu	Ser	Val	Phe	Gly	Val	Leu	Ile	Leu	Thr	Leu	Leu	Gly
		35					40					45			
Phe	Leu	Val	Ala	Ala	Thr	Phe	Ala	Trp	Asn	Leu	Leu	Val	Leu	Ala	Thr
	50					55					60				
Ile	Leu	Arg	Val	Arg	Thr	Phe	His	Arg	Val	Pro	His	Asn	Leu	Val	Ala
	65				70					75					80
Ser	Met	Ala	Val	Ser	Asp	Val	Leu	Val	Ala	Ala	Leu	Val	Met	Pro	Leu
				85					90					95	
Ser	Leu	Val	His	Glu	Leu	Ser	Gly	Arg	Arg	Trp	Gln	Leu	Gly	Arg	Arg
		100						105					110		
Leu	Cys	Gln	Leu	Trp	Ile	Ala	Cys	Asp	Val	Leu	Cys	Cys	Thr	Ala	Ser
	115						120					125			
Ile	Trp	Asn	Val	Thr	Ala	Ile	Ala	Leu	Asp	Arg	Tyr	Trp	Ser	Ile	Thr
	130					135					140				
Arg	His	Met	Glu	Tyr	Thr	Leu	Arg	Thr	Arg	Lys	Cys	Val	Ser	Asn	Val
	145				150					155					160
Met	Ile	Ala	Leu	Thr	Trp	Ala	Leu	Ser	Ala	Val	Ile	Ser	Leu	Ala	Pro


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aggacccac gccaggggt ggagtctgt gacagcagc gtctagccac gaagcacagc 780
aggaaggccc tgaaggccaa gctgacgctg ggcacccctgc tgggcatgtt ctttgtgacc 840
tggttgccct tctttgtggc caacatagtc caggccgtgt ggcactgcat ctcccaggc 900
ctcttcgatg tcttcacatg gctgggttac tgtaacagca ccatgaaccc catcatctac 960
ccactcttca tgcgggactt caagcgggcg ctgggcaggt tcttgccatg tccacgctgt 1020
ccccgggagc gccaggccag cctggcctcg ccatcactgc gcacctctca cagcggcccc 1080
cggcccggcc ttagcctaca gcagggtgtg ccgctgcccc tgcgcgcgga ctcagattcg 1140
gactcagacg caggctcagg cggctcctcg ggcctgcggc tcacggccca gctgctgctt 1200
cctggcgagg ccaccagga cccccgctg cccaccaggg ccgctgccgc cgtcaatttc 1260
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tga                                     1323

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<210> 449

<211> 440

<212> PRT

<213> Homo sapiens

<400> 449

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Met Val Pro Glu Pro Gly Pro Thr Ala Asn Ser Thr Pro Ala Trp Gly
  1              5              10              15

Ala Gly Pro Pro Ser Ala Pro Gly Gly Ser Gly Trp Val Ala Ala Ala
      20              25              30

Leu Cys Val Val Ile Ala Leu Thr Ala Ala Ala Asn Ser Leu Leu Ile
      35              40              45

Ala Leu Ile Cys Thr Gln Pro Ala Leu Arg Asn Thr Ser Asn Phe Phe
      50              55              60

Leu Val Ser Leu Phe Thr Ser Asp Leu Met Val Gly Leu Val Val Met
      65              70              75              80

Pro Pro Ala Met Leu Asn Ala Leu Tyr Gly Arg Trp Val Leu Ala Arg
      85              90              95

Gly Leu Cys Leu Leu Trp Thr Ala Phe Asp Val Met Cys Cys Ser Ala
      100             105             110

Ser Ile Leu Asn Leu Cys Leu Ile Ser Leu Asp Arg Tyr Leu Leu Ile
      115             120             125

Leu Ser Pro Leu Arg Tyr Lys Leu Arg Met Thr Pro Leu Arg Ala Leu
      130             135             140

Ala Leu Val Leu Gly Ala Trp Ser Leu Ala Ala Leu Ala Ser Phe Leu
      145             150             155             160

Pro Leu Leu Leu Gly Trp His Glu Leu Gly His Ala Arg Pro Pro Val
      165             170             175

Pro Gly Gln Cys Arg Leu Leu Ala Ser Leu Pro Phe Val Leu Val Ala
      180             185             190

Ser Gly Leu Thr Phe Phe Leu Pro Ser Gly Ala Ile Cys Phe Thr Tyr
      195             200             205

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Cys Arg Ile Leu Leu Ala Ala Arg Lys Gln Ala Val Gln Val Ala Ser
 210 215 220

Leu Thr Thr Gly Met Ala Ser Gln Ala Ser Glu Thr Leu Gln Val Pro
 225 230 235 240

Arg Thr Pro Arg Pro Gly Val Glu Ser Ala Asp Ser Arg Arg Leu Ala
 245 250 255

Thr Lys His Ser Arg Lys Ala Leu Lys Ala Lys Leu Thr Leu Gly Ile
 260 265 270

Leu Leu Gly Met Phe Phe Val Thr Trp Leu Pro Phe Phe Val Ala Asn
 275 280 285

Ile Val Gln Ala Val Cys Asp Cys Ile Ser Pro Gly Leu Phe Asp Val
 290 295 300

Leu Thr Trp Leu Gly Tyr Cys Asn Ser Thr Met Asn Pro Ile Ile Tyr
 305 310 315 320

Pro Leu Phe Met Arg Asp Phe Lys Arg Ala Leu Gly Arg Phe Leu Pro
 325 330 335

Cys Pro Arg Cys Pro Arg Glu Arg Gln Ala Ser Leu Ala Ser Pro Ser
 340 345 350

Leu Arg Thr Ser His Ser Gly Pro Arg Pro Gly Leu Ser Leu Gln Gln
 355 360 365

Val Leu Pro Leu Pro Leu Pro Pro Asp Ser Asp Ser Asp Ser Asp Ala
 370 375 380

Gly Ser Gly Gly Ser Ser Gly Leu Arg Leu Thr Ala Gln Leu Leu Leu
 385 390 395 400

Pro Gly Glu Ala Thr Gln Asp Pro Pro Leu Pro Thr Arg Ala Ala Ala
 405 410 415

Ala Val Asn Phe Phe Asn Ile Asp Pro Ala Glu Pro Glu Leu Arg Pro
 420 425 430

His Pro Leu Gly Ile Pro Thr Asn
 435 440

<210> 450
 <211> 1379
 <212> DNA
 <213> Homo sapiens

<400> 450
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 ctgccagaag tggggcgcg gctgcccgac ttgagccccg acggtggcgc cgacccggtc 120
 gcgggctcct gggcgccgca cctgctgagc gaggtgacag ccagcccggc gccacctgg 180
 gacgcgcccc cggacaatgc ctccggctgt ggggaacaga tcaactacgg cagagtcgag 240

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aaagttgtga tcggctccat cctgacgctc atcacgctgc tgacgatcgc gggcaactgc 300
ctgggtggtga tctccgtgtg cttcgtcaag aagctccgcc agccctccaa ctacctgac 360
gtgtccctgg cgctggccga cctctcggtg gctgtggcgg tcatgccctt cgtcagcgtc 420
accgacctca tcggggggcaa gtggatcttt ggacactttt tctgtaatgt cttcatcgcc 480
atggacgtca tgtgctgcac ggcctcgatc atgaccctgt gcgtgatcag cattgacagg 540
taccttggga tcacaaggcc cctcacatac cctgtgaggc agaatgggaa atgcatggcg 600
aagatgattc tctccgtctg gcttctctcc gcctccatca ccttacctcc actctttgga 660
tgggctcaga atgtaaata tgataaagggtg tgcttgatca gccaggactt tggctatacg 720
atttactcta ccgcagtggtc attttatata cccatgtccg tcatgctttt catgtactac 780
cagattttaca aggctgccag gaagagtgtc gccaaacaca agtttcctgg cttccctcga 840
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cgagaacaga aagcaaagac caccctgggg atcatcgctg gggcctttac cgtgtgctgg 1020
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atcccactgt ggggtggagag gacatttctg ttgctagggt atgcaaactc tctcattaac 1140
ccttttatat atgccttctt caaccgggac ctgaggacca cctatcgcat cctgctccag 1200
tgccagtacc ggaatatcaa ccggaagctc tcagctgcag gcatgcatga agccctgaag 1260
cttgctgaga ggccagagag acctgagttt gtgctacaaa atgctgacta ctgtagaaaa 1320
aaaggtcatg attcatgatt gaaagcagaa caatggagag gaattcgata tcaagctta 1379

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<210> 451
 <211> 445
 <212> PRT
 <213> Homo sapiens

<400> 451
 Met Met Asp Val Asn Ser Ser Gly Arg Pro Asp Leu Tyr Gly His Leu
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 Arg Ser Phe Leu Leu Pro Glu Val Gly Arg Gly Leu Pro Asp Leu Ser
 20 25 30
 Pro Asp Gly Gly Ala Asp Pro Val Ala Gly Ser Trp Ala Pro His Leu
 35 40 45
 Leu Ser Glu Val Thr Ala Ser Pro Ala Pro Thr Trp Asp Ala Pro Pro
 50 55 60
 Asp Asn Ala Ser Gly Cys Gly Glu Gln Ile Asn Tyr Gly Arg Val Glu
 65 70 75 80
 Lys Val Val Ile Gly Ser Ile Leu Thr Leu Ile Thr Leu Leu Thr Ile
 85 90 95
 Ala Gly Asn Cys Leu Val Val Ile Ser Val Cys Phe Val Lys Lys Leu
 100 105 110
 Arg Gln Pro Ser Asn Tyr Leu Ile Val Ser Leu Ala Leu Ala Asp Leu
 115 120 125
 Ser Val Ala Val Ala Val Met Pro Phe Val Ser Val Thr Asp Leu Ile
 130 135 140
 Gly Gly Lys Trp Ile Phe Gly His Phe Phe Cys Asn Val Phe Ile Ala
 145 150 155 160

Met	Asp	Val	Met	Cys	Cys	Thr	Ala	Ser	Ile	Met	Thr	Leu	Cys	Val	Ile	
				165					170					175		
Ser	Ile	Asp	Arg	Tyr	Leu	Gly	Ile	Thr	Arg	Pro	Leu	Thr	Tyr	Pro	Val	
			180					185					190			
Arg	Gln	Asn	Gly	Lys	Cys	Met	Ala	Lys	Met	Ile	Leu	Ser	Val	Trp	Leu	
		195					200					205				
Leu	Ser	Ala	Ser	Ile	Thr	Leu	Pro	Pro	Leu	Phe	Gly	Trp	Ala	Gln	Asn	
	210					215					220					
Val	Asn	Asp	Asp	Lys	Val	Cys	Leu	Ile	Ser	Gln	Asp	Phe	Gly	Tyr	Thr	
225					230					235					240	
Ile	Tyr	Ser	Thr	Ala	Val	Ala	Phe	Tyr	Ile	Pro	Met	Ser	Val	Met	Leu	
				245					250					255		
Phe	Met	Tyr	Tyr	Gln	Ile	Tyr	Lys	Ala	Ala	Arg	Lys	Ser	Ala	Ala	Lys	
			260					265					270			
His	Lys	Phe	Pro	Gly	Phe	Pro	Arg	Val	Glu	Pro	Asp	Ser	Val	Ile	Ala	
		275					280					285				
Leu	Asn	Gly	Ile	Val	Lys	Leu	Gln	Lys	Glu	Val	Glu	Glu	Cys	Ala	Asn	
	290					295					300					
Leu	Ser	Arg	Leu	Leu	Lys	His	Glu	Arg	Lys	Asn	Ile	Ser	Ile	Phe	Lys	
305					310					315					320	
Arg	Glu	Gln	Lys	Ala	Lys	Thr	Thr	Leu	Gly	Ile	Ile	Val	Gly	Ala	Phe	
				325					330					335		
Thr	Val	Cys	Trp	Leu	Pro	Phe	Phe	Leu	Leu	Ser	Thr	Ala	Arg	Pro	Phe	
			340					345					350			
Ile	Cys	Gly	Thr	Ser	Cys	Ser	Cys	Ile	Pro	Leu	Trp	Val	Glu	Arg	Thr	
		355					360					365				
Phe	Leu	Trp	Leu	Gly	Tyr	Ala	Asn	Ser	Leu	Ile	Asn	Pro	Phe	Ile	Tyr	
	370					375					380					
Ala	Phe	Phe	Asn	Arg	Asp	Leu	Arg	Thr	Thr	Tyr	Arg	Ser	Leu	Leu	Gln	
385					390					395					400	
Cys	Gln	Tyr	Arg	Asn	Ile	Asn	Arg	Lys	Leu	Ser	Ala	Ala	Gly	Met	His	
				405					410					415		
Glu	Ala	Leu	Lys	Leu	Ala	Glu	Arg	Pro	Glu	Arg	Pro	Glu	Phe	Val	Leu	
			420					425					430			
Gln	Asn	Ala	Asp	Tyr	Cys	Arg	Lys	Lys	Gly	His	Asp	Ser				
		435					440					445				

<210> 452
<211> 1257

<212> DNA
<213> Homo sapiens

<400> 452
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ccaccgaggg acgtgcgcaa cgaggagctg gccaaactgg agatcgccgt gctggcggtg 180
actttcgcgg tggccgtgct gggcaacagc agcgtactgc tggctctgca ccggacgccg 240
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caagcgggtg tggccttcca aaaggggttc ctgctcgcac cctgtgtcag cagcgtgaag 840
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gtctggaccg aatcggaata ccctaccatc accatcactg cattactggg ttccttgaat 1020
agctgctgta atccctggat atacatgttt tttagtggcc atctccttca agactgtgtt 1080
caaagcttcc catgctgcca aaacatgaag gaaaaattca acaaagaaga tactgacagt 1140
atgagcagaa gacagacttt ttattctaac aatcgaagcc caacaaacag tacgggtatg 1200
tggaaggact cgcctaaatc ttccaagtcc atcaaattca ttcctgtttc aacttga 1257

<210> 453
<211> 418
<212> PRT
<213> Homo sapiens

<400> 453
Met Arg Leu Ser Ala Gly Pro Asp Ala Gly Pro Ser Gly Asn Ser Ser
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Pro Trp Trp Pro Leu Ala Thr Gly Ala Gly Asn Thr Ser Arg Glu Ala
20 25 30
Glu Ala Leu Gly Glu Gly Asn Gly Pro Pro Arg Asp Val Arg Asn Glu
35 40 45
Glu Leu Ala Lys Leu Glu Ile Ala Val Leu Ala Val Thr Phe Ala Val
50 55 60
Ala Val Leu Gly Asn Ser Ser Val Leu Leu Ala Leu His Arg Thr Pro
65 70 75 80
Arg Lys Thr Ser Arg Met His Leu Phe Ile Arg His Leu Ser Leu Ala
85 90 95
Asp Leu Ala Val Ala Phe Phe Gln Val Leu Pro Gln Met Cys Trp Asp
100 105 110
Ile Thr Tyr Arg Phe Arg Gly Pro Asp Trp Leu Cys Arg Val Val Lys
115 120 125

His	Leu	Gln	Val	Phe	Gly	Met	Phe	Ala	Ser	Ala	Tyr	Met	Leu	Val	Val
130						135					140				
Met	Thr	Ala	Asp	Arg	Tyr	Ile	Ala	Val	Cys	His	Pro	Leu	Lys	Thr	Leu
145					150					155					160
Gln	Gln	Pro	Ala	Arg	Arg	Ser	Arg	Leu	Met	Ile	Ala	Ala	Ala	Trp	Val
				165					170					175	
Leu	Ser	Phe	Val	Leu	Ser	Thr	Pro	Gln	Tyr	Phe	Val	Phe	Ser	Met	Ile
			180					185					190		
Glu	Val	Asn	Asn	Val	Thr	Lys	Ala	Arg	Asp	Cys	Trp	Ala	Thr	Phe	Ile
		195					200					205			
Gln	Pro	Trp	Gly	Ser	Arg	Ala	Tyr	Val	Thr	Trp	Met	Thr	Gly	Gly	Ile
	210					215					220				
Phe	Val	Ala	Pro	Val	Val	Ile	Leu	Gly	Thr	Cys	Tyr	Gly	Phe	Ile	Cys
225					230					235					240
Tyr	Asn	Ile	Trp	Cys	Asn	Val	Arg	Gly	Lys	Thr	Ala	Ser	Arg	Gln	Ser
				245					250					255	
Lys	Gly	Ala	Glu	Gln	Ala	Gly	Val	Ala	Phe	Gln	Lys	Gly	Phe	Leu	Leu
			260					265					270		
Ala	Pro	Cys	Val	Ser	Ser	Val	Lys	Ser	Ile	Ser	Arg	Ala	Lys	Ile	Arg
		275					280					285			
Thr	Lys	Lys	Met	Thr	Phe	Val	Ile	Val	Thr	Ala	Tyr	Ile	Val	Cys	Trp
	290					295					300				
Ala	Pro	Phe	Phe	Ile	Ile	Gln	Met	Trp	Ser	Val	Trp	Asp	Pro	Met	Ser
305					310					315					320
Val	Trp	Thr	Glu	Ser	Glu	Asn	Pro	Thr	Ile	Thr	Ile	Thr	Ala	Leu	Leu
				325					330					335	
Gly	Ser	Leu	Asn	Ser	Cys	Cys	Asn	Pro	Trp	Ile	Tyr	Met	Phe	Phe	Ser
			340					345					350		
Gly	His	Leu	Leu	Gln	Asp	Cys	Val	Gln	Ser	Phe	Pro	Cys	Cys	Gln	Asn
		355					360					365			
Met	Lys	Glu	Lys	Phe	Asn	Lys	Glu	Asp	Thr	Asp	Ser	Met	Ser	Arg	Arg
	370					375					380				
Gln	Thr	Phe	Tyr	Ser	Asn	Asn	Arg	Ser	Pro	Thr	Asn	Ser	Thr	Gly	Met
385					390					395					400
Trp	Lys	Asp	Ser	Pro	Lys	Ser	Ser	Lys	Ser	Ile	Lys	Phe	Ile	Pro	Val
				405					410					415	
Ser	Thr														

<210> 454
 <211> 1275
 <212> DNA
 <213> Homo sapiens

<400> 454
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 aatgccacaa caccctggct gggccgggat gaggagctgg ccaaggtgga gatcggagtc 120
 ctggccactg tcctgggtgct ggcgaccggg ggcaacctgg ctgtgctgct gaccctgggc 180
 cagctggggc gcaagcgctc ccgcatgcac ctgttcgtgc tgcacttagc cctgacagac 240
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 cagggccccg acctcctgtg cagggccgtc aagtacctgc aggtgctcag catgtttgcc 360
 tccacctaca tgctgctggc catgacgctg gaccgctacc tggctgtctg tcacccctg 420
 cgcagcctcc agcagccagg ccagtccacc tacctgctca tcgctgctcc ctggctgctg 480
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 ctcatctgcc atgagatctg taaaaacctt aaagtcaaga cacaggcctg gcgggtggga 720
 ggagggggct ggaggacttg ggacaggccc tcaccttcca ccttagctgc caccactcgg 780
 gggctgccat ctcggtcag cagcatcaac accatctcac gggccaagat ccgaacaaag 840
 aagatgacct ttgtcatcgt gctggcctac atcgcttgct gggctccctt cttcagtgtc 900
 cagatgtggt ccgtgtggga caagaatgcc cctgatgaag attccaccaa tgtggctttc 960
 accatctcta tgcttttggg caacctcaac agctgctgca acccctggat ctacatgggc 1020
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 cccaggatgc gccggcggt ctccgacggc agcctctcga gccgccacac cacgctgctg 1140
 acccgctcca gctgccggc caccctcagc ctacgctca gcctaaccct cagtgggagg 1200
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 accatcatct tttag 1275

<210> 455
 <211> 424
 <212> PRT
 <213> Homo sapiens

<400> 455
 Met Asp Ser Gly Pro Leu Trp Asp Ala Asn Pro Thr Pro Arg Gly Thr
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 Leu Ser Ala Pro Asn Ala Thr Thr Pro Trp Leu Gly Arg Asp Glu Glu
 20 25 30
 Leu Ala Lys Val Glu Ile Gly Val Leu Ala Thr Val Leu Val Leu Ala
 35 40 45
 Thr Gly Gly Asn Leu Ala Val Leu Leu Thr Leu Gly Gln Leu Gly Arg
 50 55 60
 Lys Arg Ser Arg Met His Leu Phe Val Leu His Leu Ala Leu Thr Asp
 65 70 75 80
 Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln Leu Leu Trp Asp Ile
 85 90 95
 Thr Tyr Arg Phe Gln Gly Pro Asp Leu Leu Cys Arg Ala Val Lys Tyr
 100 105 110

Leu	Gln	Val	Leu	Ser	Met	Phe	Ala	Ser	Thr	Tyr	Met	Leu	Leu	Ala	Met	115	120	125
Thr	Leu	Asp	Arg	Tyr	Leu	Ala	Val	Cys	His	Pro	Leu	Arg	Ser	Leu	Gln	130	135	140
Gln	Pro	Gly	Gln	Ser	Thr	Tyr	Leu	Leu	Ile	Ala	Ala	Pro	Trp	Leu	Leu	145	150	155
Ala	Ala	Ile	Phe	Ser	Leu	Pro	Gln	Val	Phe	Ile	Phe	Ser	Leu	Arg	Glu	165	170	175
Val	Ile	Gln	Gly	Ser	Gly	Val	Leu	Asp	Cys	Trp	Ala	Asp	Phe	Gly	Phe	180	185	190
Pro	Trp	Gly	Pro	Arg	Ala	Tyr	Leu	Thr	Trp	Thr	Thr	Leu	Ala	Ile	Phe	195	200	205
Val	Leu	Pro	Val	Thr	Met	Leu	Thr	Ala	Cys	Tyr	Ser	Leu	Ile	Cys	His	210	215	220
Glu	Ile	Cys	Lys	Asn	Leu	Lys	Val	Lys	Thr	Gln	Ala	Trp	Arg	Val	Gly	225	230	235
Gly	Gly	Gly	Trp	Arg	Thr	Trp	Asp	Arg	Pro	Ser	Pro	Ser	Thr	Leu	Ala	245	250	255
Ala	Thr	Thr	Arg	Gly	Leu	Pro	Ser	Arg	Val	Ser	Ser	Ile	Asn	Thr	Ile	260	265	270
Ser	Arg	Ala	Lys	Ile	Arg	Thr	Lys	Lys	Met	Thr	Phe	Val	Ile	Val	Leu	275	280	285
Ala	Tyr	Ile	Ala	Cys	Trp	Ala	Pro	Phe	Phe	Ser	Val	Gln	Met	Trp	Ser	290	295	300
Val	Trp	Asp	Lys	Asn	Ala	Pro	Asp	Glu	Asp	Ser	Thr	Asn	Val	Ala	Phe	305	310	315
Thr	Ile	Ser	Met	Leu	Leu	Gly	Asn	Leu	Asn	Ser	Cys	Cys	Asn	Pro	Trp	325	330	335
Ile	Tyr	Met	Gly	Phe	Asn	Ser	His	Leu	Leu	Pro	Arg	Pro	Leu	Arg	His	340	345	350
Leu	Ala	Cys	Cys	Gly	Gly	Pro	Gln	Pro	Arg	Met	Arg	Arg	Arg	Leu	Ser	355	360	365
Asp	Gly	Ser	Leu	Ser	Ser	Arg	His	Thr	Thr	Leu	Leu	Thr	Arg	Ser	Ser	370	375	380
Cys	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Leu	Ser	Leu	Thr	Leu	Ser	Gly	Arg	385	390	395
Pro	Arg	Pro	Glu	Glu	Ser	Pro	Arg	Asp	Leu	Glu	Leu	Ala	Asp	Gly	Glu	405	410	415

Gly Thr Ala Glu Thr Ile Ile Phe
420

<210> 456
<211> 1116
<212> DNA
<213> Homo sapiens

<400> 456
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agcaacagca gccaggagag gccactggac acccgggacc cgctgctagc ccgggcgagg 120
ctggcgctgc tctccatagt ctttgtggct gtggccctga gcaatggcct ggtgctggcg 180
gccctagetc ggcggggccc gcggggccac tgggcaccca tacacgtctt cattggccac 240
ttgtgcctgg ccgacctggc cgtggctctg ttccaagtgc tgcccagct ggcctggaag 300
gccaccgacc gcttccgtgg gccagatgcc ctgtgtcggg ccgtgaagta tctgcagatg 360
gtgggcatgt atgcctcctc ctacatgata ctggccatga cgctggaccg ccaccgtgcc 420
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cgcaacgtgg aaggtggcag cggggtcact gactgctggg cctgctttgc ggagccctgg 600
ggcgcgtcga cctatgtcac ctggattgcc ctgatggtgt tcgtggcacc taccctgggt 660
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tcagagaggc ctggggggcg ccgcagggga cgccggacag gcagccccgg tgagggagcc 780
cacgtgtcag cagctgtggc caagactaag aggatgacgc tagtgattgt ggtcgtctat 840
gtgctgtgct gggcaccctt cttcctggtg cagctgtggg ccgcgtggga ccgggaggca 900
cctctggaag gggcgccctt tgtgctactc atgttgctgg ccagcctcaa cagctgcacc 960
aacccttga tctatgcata ttccagcagc agcgtgtcct cagagctgag aagcttgctc 1020
tgctgtgccc ggggacgcac cccaccagc ctgggtcccc aagatgagtc ctgcaccacc 1080
gccagctcct ccctggccaa ggacacttca tcgtga 1116

<210> 457
<211> 371
<212> PRT
<213> Homo sapiens

<400> 457
Met Leu Met Ala Ser Thr Thr Ser Ala Val Pro Gly His Pro Ser Leu
1 5 10 15
Pro Ser Leu Pro Ser Asn Ser Ser Gln Glu Arg Pro Leu Asp Thr Arg
20 25 30
Asp Pro Leu Leu Ala Arg Ala Glu Leu Ala Leu Leu Ser Ile Val Phe
35 40 45
Val Ala Val Ala Leu Ser Asn Gly Leu Val Leu Ala Ala Leu Ala Arg
50 55 60
Arg Gly Arg Arg Gly His Trp Ala Pro Ile His Val Phe Ile Gly His
65 70 75 80
Leu Cys Leu Ala Asp Leu Ala Val Ala Leu Phe Gln Val Leu Pro Gln
85 90 95
Leu Ala Trp Lys Ala Thr Asp Arg Phe Arg Gly Pro Asp Ala Leu Cys

<213> Homo sapiens

<400> 458

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atggctcaaa ggcagcctca ctcacctaata cagacttttaa tttcaatcac aaatgacaca 60
gaatcatcaa gctctgtggg ttctaacgat aacacaaata aaggatggag cggggacaac 120
tctccaggaa tagaagcatt gtgtgccatc tatattactt atgctgtgat catttcagt 180
ggcatccttg gaaatgctat tctcatcaaa gtctttttca agaccaaata catgcaaaca 240
gttccaaata ttttcatcac cagcctgggt tttggagatc ttttacttct gctaacttgt 300
gtgccagtgg atgcaactca ctaccttgca gaaggatggc tggtcggag aattgggtgt 360
aagggtgctc ttttcatccg gctcacttct gttggtgtgt cagtgttcac attaacaatt 420
ctcagcgctg acagatacaa ggcagttgtg aagccacttg agcgacagcc ctccaatgcc 480
atcctgaaga ctgtgtgtaa agctggctgc gtctggatcg tgtctatgat atttgctcta 540
cctgaggcta ttttttcaaa tgtatacact tttcgagatc ccaataaaaa tatgacattt 600
gaatcatgta cctcttatcc tgtctctaag aagctcttgc aagaaataca ttctctgtg 660
tgcttcttag tgttctacat tattccactc tctattatct ctgtctacta ttctctgatt 720
gctaggaccc tttacaaaag caccctgaac atacctactg aggaacaaag ccatgcccg 780
aagcagattg aatcccgaaa gagaattaaa agaacggtat tgggtgttgt ggctctgtt 840
gccctctgct ggttgccaaa tcacctcctg tacctctacc attcattcac ttctcaaacc 900
tatgtagacc cctctgccat gcatttcatt ttcaccattt tctctcgggt tttggctttc 960
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tctcttacca ccttggtgtg gatgggaacg gtcccgggca ctgggagcat acagatgtct 1140
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<210> 459

<211> 399

<212> PRT

<213> Homo sapiens

<400> 459

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Met Ala Gln Arg Gln Pro His Ser Pro Asn Gln Thr Leu Ile Ser Ile
  1              5              10              15

Thr Asn Asp Thr Glu Ser Ser Ser Ser Val Val Ser Asn Asp Asn Thr
  20              25              30

Asn Lys Gly Trp Ser Gly Asp Asn Ser Pro Gly Ile Glu Ala Leu Cys
  35              40              45

Ala Ile Tyr Ile Thr Tyr Ala Val Ile Ile Ser Val Gly Ile Leu Gly
  50              55              60

Asn Ala Ile Leu Ile Lys Val Phe Phe Lys Thr Lys Ser Met Gln Thr
  65              70              75              80

Val Pro Asn Ile Phe Ile Thr Ser Leu Ala Phe Gly Asp Leu Leu Leu
  85              90              95

Leu Leu Thr Cys Val Pro Val Asp Ala Thr His Tyr Leu Ala Glu Gly
 100              105              110

Trp Leu Phe Gly Arg Ile Gly Cys Lys Val Leu Ser Phe Ile Arg Leu
 115              120              125

Thr Ser Val Gly Val Ser Val Phe Thr Leu Thr Ile Leu Ser Ala Asp
 130              135              140

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Arg	Tyr	Lys	Ala	Val	Val	Lys	Pro	Leu	Glu	Arg	Gln	Pro	Ser	Asn	Ala	
145					150					155					160	
Ile	Leu	Lys	Thr	Cys	Val	Lys	Ala	Gly	Cys	Val	Trp	Ile	Val	Ser	Met	
				165					170					175		
Ile	Phe	Ala	Leu	Pro	Glu	Ala	Ile	Phe	Ser	Asn	Val	Tyr	Thr	Phe	Arg	
			180					185					190			
Asp	Pro	Asn	Lys	Asn	Met	Thr	Phe	Glu	Ser	Cys	Thr	Ser	Tyr	Pro	Val	
		195					200					205				
Ser	Lys	Lys	Leu	Leu	Gln	Glu	Ile	His	Ser	Leu	Leu	Cys	Phe	Leu	Val	
	210					215					220					
Phe	Tyr	Ile	Ile	Pro	Leu	Ser	Ile	Ile	Ser	Val	Tyr	Tyr	Ser	Leu	Ile	
225					230					235					240	
Ala	Arg	Thr	Leu	Tyr	Lys	Ser	Thr	Leu	Asn	Ile	Pro	Thr	Glu	Glu	Gln	
				245					250					255		
Ser	His	Ala	Arg	Lys	Gln	Ile	Glu	Ser	Arg	Lys	Arg	Ile	Lys	Arg	Thr	
			260					265					270			
Val	Leu	Val	Leu	Val	Ala	Leu	Phe	Ala	Leu	Cys	Trp	Leu	Pro	Asn	His	
		275					280					285				
Leu	Leu	Tyr	Leu	Tyr	His	Ser	Phe	Thr	Ser	Gln	Thr	Tyr	Val	Asp	Pro	
	290					295					300					
Ser	Ala	Met	His	Phe	Ile	Phe	Thr	Ile	Phe	Ser	Arg	Val	Leu	Ala	Phe	
305					310					315					320	
Ser	Asn	Ser	Cys	Val	Asn	Pro	Phe	Ala	Leu	Tyr	Trp	Leu	Ser	Lys	Ser	
				325					330					335		
Phe	Gln	Lys	His	Phe	Lys	Ala	Gln	Leu	Phe	Cys	Cys	Lys	Ala	Glu	Arg	
			340					345					350			
Pro	Glu	Pro	Pro	Val	Ala	Asp	Thr	Ser	Leu	Thr	Thr	Leu	Ala	Val	Met	
		355					360					365				
Gly	Thr	Val	Pro	Gly	Thr	Gly	Ser	Ile	Gln	Met	Ser	Glu	Ile	Ser	Val	
	370					375					380					
Thr	Ser	Phe	Thr	Gly	Cys	Ser	Val	Lys	Gln	Ala	Glu	Asp	Arg	Phe		
385					390					395						

<210> 460
 <211> 1062
 <212> DNA
 <213> Homo sapiens

<400> 460
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gcctctgata tgggtgtttgt cttgggcttg cccttctggg cagagaatat ctggaaccag 300
tttaactggc ctttcggagc cctcctctgc cgtgtcatca acgggggtcat caaggccaat 360
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caccctatgg ccagccggag gcagcagcgg cggaggcagg ccggggtcac ctgctgctc 480
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gtcccagatc tgaacatcac cgcctgcatc ctgctcctcc cccatgagge ctggcacttt 600
gcaaggattg tggagttaaa tattctgggt ttcctcctac cactgggtgc gatcgtcttc 660
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ggggggccgca aggatagcaa gaccaaagcg ctgatacctca cgctcgtggt tgccttcctg 780
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gtccgaggct gcttttggga ggacttcatt gacctgggccc tgcaattggc caacttcctt 900
gccttcacta acagctccct gaatccagta atttatgtct ttgtgggccc gctcttcagg 960
accaaggtct gggaacttta taaacaatgc acccctaata gtcttgctcc aatatcttca 1020
tcccatagga aagaaatctt ccaacttttc tggcggaatt aa 1062

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<210> 461
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 461

Met	Ala	Ser	Ser	Trp	Pro	Pro	Leu	Glu	Leu	Gln	Ser	Ser	Asn	Gln	Ser
1				5					10					15	
Gln	Leu	Phe	Pro	Gln	Asn	Ala	Thr	Ala	Cys	Asp	Asn	Ala	Pro	Glu	Ala
			20					25					30		
Trp	Asp	Leu	Leu	His	Arg	Val	Leu	Pro	Thr	Phe	Ile	Ile	Ser	Ile	Cys
		35					40					45			
Phe	Phe	Gly	Leu	Leu	Gly	Asn	Leu	Phe	Val	Leu	Leu	Val	Phe	Leu	Leu
	50					55					60				
Pro	Arg	Arg	Gln	Leu	Asn	Val	Ala	Glu	Ile	Tyr	Leu	Ala	Asn	Leu	Ala
	65				70					75				80	
Ala	Ser	Asp	Leu	Val	Phe	Val	Leu	Gly	Leu	Pro	Phe	Trp	Ala	Glu	Asn
			85						90					95	
Ile	Trp	Asn	Gln	Phe	Asn	Trp	Pro	Phe	Gly	Ala	Leu	Leu	Cys	Arg	Val
		100						105					110		
Ile	Asn	Gly	Val	Ile	Lys	Ala	Asn	Leu	Phe	Ile	Ser	Ile	Phe	Leu	Val
	115						120					125			
Val	Ala	Ile	Ser	Gln	Asp	Arg	Tyr	Arg	Val	Leu	Val	His	Pro	Met	Ala
	130					135					140				
Ser	Arg	Arg	Gln	Gln	Arg	Arg	Arg	Gln	Ala	Arg	Val	Thr	Cys	Val	Leu
	145				150					155					160
Ile	Trp	Val	Val	Gly	Gly	Leu	Leu	Ser	Ile	Pro	Thr	Phe	Leu	Leu	Arg
			165					170						175	

Ser Ile Gln Ala Val Pro Asp Leu Asn Ile Thr Ala Cys Ile Leu Leu
180 185 190

Leu Pro His Glu Ala Trp His Phe Ala Arg Ile Val Glu Leu Asn Ile
195 200 205

Leu Gly Phe Leu Leu Pro Leu Ala Ala Ile Val Phe Phe Asn Tyr His
210 215 220

Ile Leu Ala Ser Leu Arg Thr Arg Glu Glu Val Ser Arg Thr Arg Cys
225 230 235 240

Gly Gly Arg Lys Asp Ser Lys Thr Lys Ala Leu Ile Leu Thr Leu Val
245 250 255

Val Ala Phe Leu Val Cys Trp Ala Pro Tyr His Phe Phe Ala Phe Leu
260 265 270

Glu Phe Leu Phe Gln Val Gln Ala Val Arg Gly Cys Phe Trp Glu Asp
275 280 285

Phe Ile Asp Leu Gly Leu Gln Leu Ala Asn Phe Phe Ala Phe Thr Asn
290 295 300

Ser Ser Leu Asn Pro Val Ile Tyr Val Phe Val Gly Arg Leu Phe Arg
305 310 315 320

Thr Lys Val Trp Glu Leu Tyr Lys Gln Cys Thr Pro Lys Ser Leu Ala
325 330 335

Pro Ile Ser Ser Ser His Arg Lys Glu Ile Phe Gln Leu Phe Trp Arg
340 345 350

Asn

<210> 462
<211> 1176
<212> DNA
<213> Homo sapiens

<400> 462
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acggcctctt tcagcgccga catgctcaat gtcaccttgc aagggccac tcttaacggg 120
acctttgccc agagcaaagt ccccaagtg gagggtctgg gctggctcaa caccatccag 180
cccccttcc tctgggtgct gttcgtgctg gccaccctag agaacatctt tgtcctcagc 240
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gcagcagacc tgatcctggc ctggggctg cccttctggg ccatcaccat ctccaacaac 360
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tacagcgatg agggccacaa cgtcaccgct tgtgtcatca gctacccatc cctcatctgg 660
gaagtgttca ccaacatgct cctgaatgtc gtgggcttcc tgctgccctt gagtgtcatc 720
accttctgca cgatgcagat catgcaggtg ctgcggaaca acgagatgca gaagttcaag 780

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aagaagtctt gggaggtgta ccagggagtg tgccagaaag ggggctgcag gtcagaaccc 1080
attcagatgg agaactccat gggcacactg cggacctcca tctcctgga acgccagatt 1140
caciaactgc aggactgggc agggagcaga cagtga 1176

<210> 463
<211> 391
<212> PRT
<213> Homo sapiens

<400> 463
Met Phe Ser Pro Trp Lys Ile Ser Met Phe Leu Ser Val Arg Glu Asp
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Ser Val Pro Thr Thr Ala Ser Phe Ser Ala Asp Met Leu Asn Val Thr
20 25 30
Leu Gln Gly Pro Thr Leu Asn Gly Thr Phe Ala Gln Ser Lys Cys Pro
35 40 45
Gln Val Glu Trp Leu Gly Trp Leu Asn Thr Ile Gln Pro Pro Phe Leu
50 55 60
Trp Val Leu Phe Val Leu Ala Thr Leu Glu Asn Ile Phe Val Leu Ser
65 70 75 80
Val Phe Cys Leu His Lys Ser Ser Cys Thr Val Ala Glu Ile Tyr Leu
85 90 95
Gly Asn Leu Ala Ala Ala Asp Leu Ile Leu Ala Cys Gly Leu Pro Phe
100 105 110
Trp Ala Ile Thr Ile Ser Asn Asn Phe Asp Trp Leu Phe Gly Glu Thr
115 120 125
Leu Cys Arg Val Val Asn Ala Ile Ile Ser Met Asn Leu Tyr Ser Ser
130 135 140
Ile Cys Phe Leu Met Leu Val Ser Ile Asp Arg Tyr Leu Ala Leu Val
145 150 155 160
Lys Thr Met Ser Met Gly Arg Met Arg Gly Val Arg Trp Ala Lys Leu
165 170 175
Tyr Ser Leu Val Ile Trp Gly Cys Thr Leu Leu Leu Ser Ser Pro Met
180 185 190
Leu Val Phe Arg Thr Met Lys Glu Tyr Ser Asp Glu Gly His Asn Val
195 200 205
Thr Ala Cys Val Ile Ser Tyr Pro Ser Leu Ile Trp Glu Val Phe Thr
210 215 220

Asn Met Leu Leu Asn Val Val Gly Phe Leu Leu Pro Leu Ser Val Ile
 225 230 235 240

Thr Phe Cys Thr Met Gln Ile Met Gln Val Leu Arg Asn Asn Glu Met
 245 250 255

Gln Lys Phe Lys Glu Ile Gln Thr Glu Arg Arg Ala Lys Val Leu Val
 260 265 270

Leu Val Val Leu Leu Leu Phe Ile Ile Cys Trp Leu Pro Phe Gln Ile
 275 280 285

Ser Thr Phe Leu Asp Thr Leu His Arg Leu Gly Ile Leu Ser Ser Cys
 290 295 300

Gln Asp Glu Arg Ile Ile Asp Val Ile Thr Gln Ile Ala Ser Phe Met
 305 310 315 320

Ala Tyr Ser Asn Ser Cys Leu Asn Pro Leu Val Tyr Val Ile Val Gly
 325 330 335

Lys Arg Phe Arg Lys Lys Ser Trp Glu Val Tyr Gln Gly Val Cys Gln
 340 345 350

Lys Gly Gly Cys Arg Ser Glu Pro Ile Gln Met Glu Asn Ser Met Gly
 355 360 365

Thr Leu Arg Thr Ser Ile Ser Val Glu Arg Gln Ile His Lys Leu Gln
 370 375 380

Asp Trp Ala Gly Ser Arg Gln
 385 390

<210> 464
 <211> 1449
 <212> DNA
 <213> Homo sapiens

<400> 464
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 aatgggctgg tgctgtgggt ggctggcctg aagatgcagc ggacagtga cacaatttgg 180
 ttcctccacc tcaccttggc ggacctctc tgctgcctct ccttgccctt ctgctggct 240
 cacttggctc tcaggggaca gtggccctac ggcaggttcc tatgcaagct catcccctcc 300
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 tgtcttgtgg tattcaagcc aatctggtgt cagaatcatc gcaatgtagg gatggcctgc 420
 tctatctgtg gatgtatctg ggtgggtggct tgtgtgatgt gcattcctgt gttcgtgtac 480
 cgggaaatct tcaactacaga caaccataat agatgtggct acaaatttgg tctctccagc 540
 tcattagatt atccagactt ttatggagat ccactagaaa acaggtctct tgaaaacatt 600
 gttcagccgc ctggagaaat gaatgatagg ttagatcctt cctctttcca acaaatgat 660
 catccttga cagtccccac tgtcttccaa cctcaaacat ttcaaagacc ttctgcagat 720
 tcaactcccta ggggttctgc taggttaaca agtcaaaatc tgtattctaa tgtattttaa 780
 cctgctgatg tgggtctcacc taaaatcccc agtggggttc ctattgaaga tcacgaaacc 840
 agcccactgg ataactctga tgcttttctc totactcatt taaagctgtt ccctagcgct 900
 tctagcaatt ccttctacga gtctgagcta ccacaagggt tccaggatta ttacaattta 960
 ggccaattca cagatgacga tcaagtgcc acaccctcg tggcaataac gatcactagg 1020

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ctagtgggtgg gtttcctgct gccctctgtt atcatgatag cctggttacag cttcattgtc 1080
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gtgggtgggtg ctgtctttct tgtctgctgg actccatacc acatttttgg agtcctgtca 1200
ttgcttactg acccagaaac tcccttgggg aaaactctga tgtcctggga tcatgtatgc 1260
attgctctag catctgcca tagttgcttt aatcccttcc tttatgccct cttggggaaa 1320
gatttttagga agaaagcaag gcagtcatt caggaattc tggaggcagc cttcagttag 1380
gagctcacac gttccacca ctgtccctca aacaatgtca tttcagaaag aaatagtaca 1440
actgtgtga                                     1449

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<210> 465
 <211> 482
 <212> PRT
 <213> Homo sapiens

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<400> 465
Met Ala Ser Phe Ser Ala Glu Thr Asn Ser Thr Asp Leu Leu Ser Gln
 1             5             10             15

Pro Trp Asn Glu Pro Pro Val Ile Leu Ser Met Val Ile Leu Ser Leu
      20             25             30

Thr Phe Leu Leu Gly Leu Pro Gly Asn Gly Leu Val Leu Trp Val Ala
      35             40             45

Gly Leu Lys Met Gln Arg Thr Val Asn Thr Ile Trp Phe Leu His Leu
      50             55             60

Thr Leu Ala Asp Leu Leu Cys Cys Leu Ser Leu Pro Phe Ser Leu Ala
      65             70             75             80

His Leu Ala Leu Gln Gly Gln Trp Pro Tyr Gly Arg Phe Leu Cys Lys
      85             90             95

Leu Ile Pro Ser Ile Ile Val Leu Asn Met Phe Ala Ser Val Phe Leu
      100            105            110

Leu Thr Ala Ile Ser Leu Asp Arg Cys Leu Val Val Phe Lys Pro Ile
      115            120            125

Trp Cys Gln Asn His Arg Asn Val Gly Met Ala Cys Ser Ile Cys Gly
      130            135            140

Cys Ile Trp Val Val Ala Cys Val Met Cys Ile Pro Val Phe Val Tyr
      145            150            155            160

Arg Glu Ile Phe Thr Thr Asp Asn His Asn Arg Cys Gly Tyr Lys Phe
      165            170            175

Gly Leu Ser Ser Ser Leu Asp Tyr Pro Asp Phe Tyr Gly Asp Pro Leu
      180            185            190

Glu Asn Arg Ser Leu Glu Asn Ile Val Gln Pro Pro Gly Glu Met Asn
      195            200            205

Asp Arg Leu Asp Pro Ser Ser Phe Gln Thr Asn Asp His Pro Trp Thr
      210            215            220

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Val Pro Thr Val Phe Gln Pro Gln Thr Phe Gln Arg Pro Ser Ala Asp
 225 230 235 240

Ser Leu Pro Arg Gly Ser Ala Arg Leu Thr Ser Gln Asn Leu Tyr Ser
 245 250 255

Asn Val Phe Lys Pro Ala Asp Val Val Ser Pro Lys Ile Pro Ser Gly
 260 265 270

Phe Pro Ile Glu Asp His Glu Thr Ser Pro Leu Asp Asn Ser Asp Ala
 275 280 285

Phe Leu Ser Thr His Leu Lys Leu Phe Pro Ser Ala Ser Ser Asn Ser
 290 295 300

Phe Tyr Glu Ser Glu Leu Pro Gln Gly Phe Gln Asp Tyr Tyr Asn Leu
 305 310 315 320

Gly Gln Phe Thr Asp Asp Asp Gln Val Pro Thr Pro Leu Val Ala Ile
 325 330 335

Thr Ile Thr Arg Leu Val Val Gly Phe Leu Leu Pro Ser Val Ile Met
 340 345 350

Ile Ala Cys Tyr Ser Phe Ile Val Phe Arg Met Gln Arg Gly Arg Phe
 355 360 365

Ala Lys Ser Gln Ser Lys Thr Lys Arg Val Ala Val Val Val Val Ala
 370 375 380

Val Phe Leu Val Cys Trp Thr Pro Tyr His Ile Phe Gly Val Leu Ser
 385 390 395 400

Leu Leu Thr Asp Pro Glu Thr Pro Leu Gly Lys Thr Leu Met Ser Trp
 405 410 415

Asp His Val Cys Ile Ala Leu Ala Ser Ala Asn Ser Cys Phe Asn Pro
 420 425 430

Phe Leu Tyr Ala Leu Leu Gly Lys Asp Phe Arg Lys Lys Ala Arg Gln
 435 440 445

Ser Ile Gln Gly Ile Leu Glu Ala Ala Phe Ser Glu Glu Leu Thr Arg
 450 455 460

Ser Thr His Cys Pro Ser Asn Asn Val Ile Ser Glu Arg Asn Ser Thr
 465 470 475 480

Thr Val

<210> 466
 <211> 1053
 <212> DNA
 <213> Homo sapiens

Trp Gly Leu Ala Leu Leu Leu Thr Ile Pro Ser Phe Leu Tyr Arg Val
165 170 175

Val Arg Glu Glu Tyr Phe Pro Pro Lys Val Leu Cys Gly Val Asp Tyr
180 185 190

Ser His Asp Lys Arg Arg Glu Arg Ala Val Ala Ile Val Arg Leu Val
195 200 205

Leu Gly Phe Leu Trp Pro Leu Leu Thr Leu Thr Ile Cys Tyr Thr Phe
210 215 220

Ile Leu Leu Arg Thr Trp Ser Arg Arg Ala Thr Arg Ser Thr Lys Thr
225 230 235 240

Lys Lys Val Val Val Ala Val Val Ala Ser Phe Phe Ile Phe Trp Leu
245 250 255

Pro Tyr Gln Val Thr Gly Ile Met Met Ser Phe Leu Glu Pro Ser Ser
260 265 270

Pro Thr Phe Leu Leu Leu Asn Lys Leu Asp Ser Leu Cys Val Ser Phe
275 280 285

Ala Tyr Ile Asn Cys Cys Ile Asn Pro Ile Ile Tyr Val Val Ala Gly
290 295 300

Gln Gly Phe Gln Gly Arg Leu Arg Lys Ser Leu Pro Ser Leu Leu Arg
305 310 315 320

Asn Val Leu Thr Glu Glu Ser Val Val Arg Glu Ser Lys Ser Phe Thr
325 330 335

Arg Ser Thr Val Asp Thr Met Ala Gln Lys Thr Gln Ala Val
340 345 350

<210> 468
<211> 1419
<212> DNA
<213> Homo sapiens

<400> 468
atgaagtoga tcctagatgg ccttgcagat accaccttcc gcaccatcac cactgacctc 60
ctgtacgtgg gctcaaatga cattcagtag gaagacatca aaggtgacat ggcattccaaa 120
ttaggggtact tcccacagaa attcccttta acttccttta ggggaagtcc cttccaagag 180
aagatgactg cgggagacaa cccccagcta gtcccagcag accaggtgaa cattacagaa 240
ttttacaaca agtctctctc gtccttcaag gagaatgagg agaacatcca gtgtggggag 300
aacttcatgg acatagagtg tticattggtc ctgaacccca gccagcagct ggccattgca 360
gtcctgtccc tcacgctggg caccttcacg gtccctggaga acctcctggt gctgtgcgtc 420
atcctccact cccgcagcct ccgctgcagg ccttcctacc acttcacggt cagcctggcg 480
gtggcagacc tcctggggag tgtcattttt gtctacagct tcattgactt ccacgtgttc 540
caccgcaaag atagccgcaa cgtgtttctg ttcaaactgg gtgggggtcac ggcctccttc 600
actgcctccg tgggcagcct gttcctcaca gccatcgaca ggtacatatc cattcacagg 660
cccctggcct ataagaggat tgtcaccagg cccaaggccg tggtagcggt ttgcctgatg 720
tggaccatag ccattgtgat cgcgctgctg cctctcctgg gctggaactg cgagaaactg 780


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caatctgttt gctcagacat tttccacac attgatgaaa cctacctgat gttctggatc 840
ggggtcacca gcgtactgct tctgttcac gtgtatgcgt acatgtatat tctctggaag 900
gctcacagcc acgccgtccg catgattcag cgtggcaccc agaagagcat catcatccac 960
acgtctgagg atgggaaggt acaggtgacc cggccagacc aagcccgcac ggacattagg 1020
ttaaagaaga ccctggtcct gatcctgggt gtgttgatca tctgctgggg ccctctgctt 1080
gcaatcatgg tgtatgatgt ctttgggaag atgaacaagc tcattaagac ggtgtttgca 1140
ttctgcagta tgctctgcct gctgaactcc accgtgaacc ccatcatcta tgctctgagg 1200
agtaaggacc tgcgacacgc tttccggagc atgtttccct cttgtgaagg cactgcgcag 1260
cctctggata acagcatggg ggactcggac tgctgcaca aacacgcaaa caatgcagcc 1320
agtgttcaca gggccgcaga aagctgcac aagagcacgg tcaagattgc caaggtaacc 1380
atgtctgtgt ccacagacac gtctgccgag gctctgtga 1419

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<210> 469

<211> 472

<212> PRT

<213> Homo sapiens

<400> 469

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Met Lys Ser Ile Leu Asp Gly Leu Ala Asp Thr Thr Phe Arg Thr Ile
  1             5             10             15

Thr Thr Asp Leu Leu Tyr Val Gly Ser Asn Asp Ile Gln Tyr Glu Asp
      20             25             30

Ile Lys Gly Asp Met Ala Ser Lys Leu Gly Tyr Phe Pro Gln Lys Phe
      35             40             45

Pro Leu Thr Ser Phe Arg Gly Ser Pro Phe Gln Glu Lys Met Thr Ala
      50             55             60

Gly Asp Asn Pro Gln Leu Val Pro Ala Asp Gln Val Asn Ile Thr Glu
      65             70             75             80

Phe Tyr Asn Lys Ser Leu Ser Ser Phe Lys Glu Asn Glu Glu Asn Ile
      85             90             95

Gln Cys Gly Glu Asn Phe Met Asp Ile Glu Cys Phe Met Val Leu Asn
      100            105            110

Pro Ser Gln Gln Leu Ala Ile Ala Val Leu Ser Leu Thr Leu Gly Thr
      115            120            125

Phe Thr Val Leu Glu Asn Leu Leu Val Leu Cys Val Ile Leu His Ser
      130            135            140

Arg Ser Leu Arg Cys Arg Pro Ser Tyr His Phe Ile Gly Ser Leu Ala
      145            150            155            160

Val Ala Asp Leu Leu Gly Ser Val Ile Phe Val Tyr Ser Phe Ile Asp
      165            170            175

Phe His Val Phe His Arg Lys Asp Ser Arg Asn Val Phe Leu Phe Lys
      180            185            190

Leu Gly Gly Val Thr Ala Ser Phe Thr Ala Ser Val Gly Ser Leu Phe
      195            200            205

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Leu Thr Ala Ile Asp Arg Tyr Ile Ser Ile His Arg Pro Leu Ala Tyr
210                               215                               220

Lys Arg Ile Val Thr Arg Pro Lys Ala Val Val Ala Phe Cys Leu Met
225                               230                               235                               240

Trp Thr Ile Ala Ile Val Ile Ala Val Leu Pro Leu Leu Gly Trp Asn
                               245                               250                               255

Cys Glu Lys Leu Gln Ser Val Cys Ser Asp Ile Phe Pro His Ile Asp
                               260                               265                               270

Glu Thr Tyr Leu Met Phe Trp Ile Gly Val Thr Ser Val Leu Leu Leu
275                               280                               285

Phe Ile Val Tyr Ala Tyr Met Tyr Ile Leu Trp Lys Ala His Ser His
290                               295                               300

Ala Val Arg Met Ile Gln Arg Gly Thr Gln Lys Ser Ile Ile Ile His
305                               310                               315                               320

Thr Ser Glu Asp Gly Lys Val Gln Val Thr Arg Pro Asp Gln Ala Arg
                               325                               330                               335

Met Asp Ile Arg Leu Lys Lys Thr Leu Val Leu Ile Leu Val Val Leu
                               340                               345                               350

Ile Ile Cys Trp Gly Pro Leu Leu Ala Ile Met Val Tyr Asp Val Phe
355                               360                               365

Gly Lys Met Asn Lys Leu Ile Lys Thr Val Phe Ala Phe Cys Ser Met
370                               375                               380

Leu Cys Leu Leu Asn Ser Thr Val Asn Pro Ile Ile Tyr Ala Leu Arg
385                               390                               395                               400

Ser Lys Asp Leu Arg His Ala Phe Arg Ser Met Phe Pro Ser Cys Glu
                               405                               410                               415

Gly Thr Ala Gln Pro Leu Asp Asn Ser Met Gly Asp Ser Asp Cys Leu
420                               425                               430

His Lys His Ala Asn Asn Ala Ala Ser Val His Arg Ala Ala Glu Ser
435                               440                               445

Cys Ile Lys Ser Thr Val Lys Ile Ala Lys Val Thr Met Ser Val Ser
450                               455                               460

Thr Asp Thr Ser Ala Glu Ala Leu
465                               470

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<210> 470
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 470
atggaggaat gctgggtgac agagatagcc aatggctcca aggatggctt ggattccaac 60
cctatgaagg attacatgat cctgagtggc cccagaaga cagctgttgc tgtgttgtgc 120
actcttctgg gcctgctaag tgccttgag aacgtggctg tgccttatct gatcctgtcc 180
tcccaccaac tccgccgaa gccctcatal ctgttcattg gcagcttgge tggggctgac 240
ttcctggcca gtgtggtctt tgcagtcagc ttgtgaatt tccatgtttt ccatggtgtg 300
gattccaagg ctgtcttcct gctgaagatt ggcagcgtga ctatgacctt cacagcctct 360
gtgggttagcc tctgtctgac cgccattgac cgatacctct gcctgcgcta tccaccttcc 420
tacaaagctc tgctcaccgc tgggaaggga ctggtgacct tgggcatcat gtgggtcctc 480
tcagcactag tctcctacct gccctcatg ggatggactt gctgtcccag gccctgctct 540
gagcttttcc cactgatccc caatgactac ctgctgagct ggctcctgtt catcgccttc 600
ctcttttccg gaatcatcta cacctatggg catgttctct ggaaggccca tcagcatgtg 660
gccagcttgt ctggccacca ggacaggcag gtgccaggaa tggcccgaa gaggtggat 720
gtgaggttga agaagacctt agggctagtg ttggctgtgc tctcatctg ttggttccca 780
gtgctggccc tcatggccca cagcctggcc actacgctca gtgaccaggc caagaaggcc 840
tttgctttct gctccatgct gtgcctcatc aactccatgg tcaacctgtt catctatgct 900
ctacggagtg gagagatccg ctctctgccc catcactgcc tggctcactg gaagaagtgt 960
gtgagggggc ttgggtcaga ggcaaaagaa gaagccccga gatcctcagt caccgagaca 1020
gaggctgatg ggaaaatcac tccgtggcca gattccagag atctagacct ctctgattgc 1080
tga 1083

<210> 471
<211> 360
<212> PRT
<213> Homo sapiens

<400> 471
Met Glu Glu Cys Trp Val Thr Glu Ile Ala Asn Gly Ser Lys Asp Gly
1 5 10 15
Leu Asp Ser Asn Pro Met Lys Asp Tyr Met Ile Leu Ser Gly Pro Gln
20 25 30
Lys Thr Ala Val Ala Val Leu Cys Thr Leu Leu Gly Leu Leu Ser Ala
35 40 45
Leu Glu Asn Val Ala Val Leu Tyr Leu Ile Leu Ser Ser His Gln Leu
50 55 60
Arg Arg Lys Pro Ser Tyr Leu Phe Ile Gly Ser Leu Ala Gly Ala Asp
65 70 75 80
Phe Leu Ala Ser Val Val Phe Ala Cys Ser Phe Val Asn Phe His Val
85 90 95
Phe His Gly Val Asp Ser Lys Ala Val Phe Leu Leu Lys Ile Gly Ser
100 105 110
Val Thr Met Thr Phe Thr Ala Ser Val Gly Ser Leu Leu Leu Thr Ala
115 120 125
Ile Asp Arg Tyr Leu Cys Leu Arg Tyr Pro Pro Ser Tyr Lys Ala Leu
130 135 140
Leu Thr Arg Gly Arg Ala Leu Val Thr Leu Gly Ile Met Trp Val Leu

145		150		155		160
Ser Ala Leu Val	Ser Tyr Leu Pro Leu Met Gly Trp Thr Cys Cys Pro					
	165			170		175
Arg Pro Cys Ser Glu Leu Phe Pro Leu Ile Pro Asn Asp Tyr Leu Leu						
	180			185		190
Ser Trp Leu Leu Phe Ile Ala Phe Leu Phe Ser Gly Ile Ile Tyr Thr						
	195			200		205
Tyr Gly His Val Leu Trp Lys Ala His Gln His Val Ala Ser Leu Ser						
	210			215		220
Gly His Gln Asp Arg Gln Val Pro Gly Met Ala Arg Met Arg Leu Asp						
	225			230		235
Val Arg Leu Lys Lys Thr Leu Gly Leu Val Leu Ala Val Leu Leu Ile						
	245			250		255
Cys Trp Phe Pro Val Leu Ala Leu Met Ala His Ser Leu Ala Thr Thr						
	260			265		270
Leu Ser Asp Gln Val Lys Lys Ala Phe Ala Phe Cys Ser Met Leu Cys						
	275			280		285
Leu Ile Asn Ser Met Val Asn Pro Val Ile Tyr Ala Leu Arg Ser Gly						
	290			295		300
Glu Ile Arg Ser Ser Ala His His Cys Leu Ala His Trp Lys Lys Cys						
	305			310		315
Val Arg Gly Leu Gly Ser Glu Ala Lys Glu Glu Ala Pro Arg Ser Ser						
	325			330		335
Val Thr Glu Thr Glu Ala Asp Gly Lys Ile Thr Pro Trp Pro Asp Ser						
	340			345		350
Arg Asp Leu Asp Leu Ser Asp Cys						
	355			360		

<210> 472
 <211> 1083
 <212> DNA
 <213> Homo sapiens

<400> 472
 atgctgtcca catctcgttc tcggttttatc agaaatacca acgagagcgg tgaagaagtc 60
 accacaccttt ttgattatga ttacgggtgct ccctgtcata aatttgacgt gaagcaaatt 120
 ggggcccaac tctgcctcc gctctactcg ctgggtgttca tctttggttt tgtgggcaac 180
 atgctgggtcg tctcatctt aataaactgc aaaaagctga agtgcttgac tgacatttac 240
 ctgctcaacc tggccatctc tgatctgctt tttcttatta ctctccatt gtgggctcac 300
 tctgctgcaa atgagtgggt ctttggggaat gcaatgtgca aattattcac agggctgtat 360
 cacatcgggtt attttggcgg aatcttcttc atcatcctcc tgacaatcga tagatacctg 420
 gctattgtcc atgctgtgtt tgctttaaaa gccaggacgg tcacctttgg ggtggtgaca 480
 agtgtgatca cctggttggg ggctgtgttt gcttctgtcc caggaatcat ctttactaaa 540

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tgccagaaag aagattctgt ttatgtctgt ggccttatt ttccacgagg atggaataat 600
ttccacacaa taatgaggaa cattttgggg ctggtcctgc cgctgctcat catgggtcatc 660
tgctactcgg gaatcctgaa aaccctgctt cgggtgctgaa acgagaagaa gaggcataagg 720
gcaaagagag tcattcttcac catcatgatt gtttactttc tcttctggac tccctataac 780
attgtcattc tcctgaacac cttccaggaa ttcttcggcc tgagtaactg tgaaagcacc 840
agtcaactgg accaagccac gcaggtgaca gagactcttg ggatgactca ctgctgcac 900
aatcccatca tctatgcctt cgttggggag aagttcagaa ggtatctctc ggtgttcttc 960
cgaaagcaca tcaccaagcg cttctgcaaa caatgtccag ttttctacag ggagacagtg 1020
gatggagtga cttcaacaaa cagccttcc actggggagc aggaagtctc ggctggttta 1080
taa 1083

```

<210> 473
 <211> 360
 <212> PRT
 <213> Homo sapiens

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<400> 473
Met Leu Ser Thr Ser Arg Ser Arg Phe Ile Arg Asn Thr Asn Glu Ser
  1             5             10             15

Gly Glu Glu Val Thr Thr Phe Phe Asp Tyr Asp Tyr Gly Ala Pro Cys
      20             25             30

His Lys Phe Asp Val Lys Gln Ile Gly Ala Gln Leu Leu Pro Pro Leu
      35             40             45

Tyr Ser Leu Val Phe Ile Phe Gly Phe Val Gly Asn Met Leu Val Val
      50             55             60

Leu Ile Leu Ile Asn Cys Lys Lys Leu Lys Cys Leu Thr Asp Ile Tyr
      65             70             75             80

Leu Leu Asn Leu Ala Ile Ser Asp Leu Leu Phe Leu Ile Thr Leu Pro
      85             90             95

Leu Trp Ala His Ser Ala Ala Asn Glu Trp Val Phe Gly Asn Ala Met
      100            105            110

Cys Lys Leu Phe Thr Gly Leu Tyr His Ile Gly Tyr Phe Gly Gly Ile
      115            120            125

Phe Phe Ile Ile Leu Leu Thr Ile Asp Arg Tyr Leu Ala Ile Val His
      130            135            140

Ala Val Phe Ala Leu Lys Ala Arg Thr Val Thr Phe Gly Val Val Thr
      145            150            155            160

Ser Val Ile Thr Trp Leu Val Ala Val Phe Ala Ser Val Pro Gly Ile
      165            170            175

Ile Phe Thr Lys Cys Gln Lys Glu Asp Ser Val Tyr Val Cys Gly Pro
      180            185            190

Tyr Phe Pro Arg Gly Trp Asn Asn Phe His Thr Ile Met Arg Asn Ile
      195            200            205

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Leu Gly Leu Val Leu Pro Leu Leu Ile Met Val Ile Cys Tyr Ser Gly
 210 215 220

Ile Leu Lys Thr Leu Leu Arg Cys Arg Asn Glu Lys Lys Arg His Arg
 225 230 235 240

Ala Lys Arg Val Ile Phe Thr Ile Met Ile Val Tyr Phe Leu Phe Trp
 245 250 255

Thr Pro Tyr Asn Ile Val Ile Leu Leu Asn Thr Phe Gln Glu Phe Phe
 260 265 270

Gly Leu Ser Asn Cys Glu Ser Thr Ser Gln Leu Asp Gln Ala Thr Gln
 275 280 285

Val Thr Glu Thr Leu Gly Met Thr His Cys Cys Ile Asn Pro Ile Ile
 290 295 300

Tyr Ala Phe Val Gly Glu Lys Phe Arg Arg Tyr Leu Ser Val Phe Phe
 305 310 315 320

Arg Lys His Ile Thr Lys Arg Phe Cys Lys Gln Cys Pro Val Phe Tyr
 325 330 335

Arg Glu Thr Val Asp Gly Val Thr Ser Thr Asn Thr Pro Ser Thr Gly
 340 345 350

Glu Gln Glu Val Ser Ala Gly Leu
 355 360

<210> 474
 <211> 1068
 <212> DNA
 <213> Homo sapiens

<400> 474
 atgacaacct cactagatac agttgagacc tttggtacca catcctacta tgatgacgtg 60
 ggctgtctct gtgaaaaagc tgataaccaga gcactgatgg cccagtttgt gccccgctg 120
 tactccctgg tgttcactgt gggcctcttg ggcaatgtgg tgggtggtgat gatcctcata 180
 aaatacagga ggctccgaat tatgaccaac atctacctgc tcaacctggc catttcggac 240
 ctgctcttcc tcgtcaccct tccattcttg atccactatg tcagggggca taactgggtt 300
 tttggccatg gcatgtgtaa gctcctctca gggttttatc acacaggctt gtacagcgag 360
 atctttttca taatcctgct gacaatcgac aggtacctgg ccattgtcca tgctgtgttt 420
 gcccttcgag cccggactgt cacttttggg gtcacacca gcacgtcac ctggggcctg 480
 gcagtgtctag cagctcttcc tgaattttatc ttctatgaga ctgaagagtt gtttgaagag 540
 actctttgca gtgctcttta cccagaggat acagtatata gctggaggca tttccacact 600
 ctgagaatga ccactcttctg tctcgttctc cctctgctcg ttatggccat ctgctacaca 660
 ggaatcatca aaacgctgct gaggtgcccc agtaaaaaaa agtacaaggc caagcggctc 720
 atttttgtca tcatggcggt gtttttcatt ttctggacac cctacaatgt ggctatcctt 780
 ctctcttcct atcaatccat cttattttgga aatgactgtg agcggagcaa gcatctggac 840
 ctggtcatgc tggtgacaga ggtgatcgcc tactccact gctgcatgaa cccggtgatc 900
 tacgcctttg ttggagagag gttccggaag tacctgccc acttcttcca caggcacttg 960
 ctcatgcacc tgggcagata catccattc cttcctagtg agaagctgga aagaaccagc 1020
 tctgtctctc catccacagc agagcggaa ctctctattg tgttttag 1068

<210> 475
 <211> 355
 <212> PRT
 <213> Homo sapiens

<400> 475

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Met Thr Thr Ser Leu Asp Thr Val Glu Thr Phe Gly Thr Thr Ser Tyr
  1          5          10          15

Tyr Asp Asp Val Gly Leu Leu Cys Glu Lys Ala Asp Thr Arg Ala Leu
          20          25          30

Met Ala Gln Phe Val Pro Pro Leu Tyr Ser Leu Val Phe Thr Val Gly
          35          40          45

Leu Leu Gly Asn Val Val Val Val Met Ile Leu Ile Lys Tyr Arg Arg
  50          55          60

Leu Arg Ile Met Thr Asn Ile Tyr Leu Leu Asn Leu Ala Ile Ser Asp
  65          70          75          80

Leu Leu Phe Leu Val Thr Leu Pro Phe Trp Ile His Tyr Val Arg Gly
          85          90          95

His Asn Trp Val Phe Gly His Gly Met Cys Lys Leu Leu Ser Gly Phe
 100          105          110

Tyr His Thr Gly Leu Tyr Ser Glu Ile Phe Phe Ile Ile Leu Leu Thr
 115          120          125

Ile Asp Arg Tyr Leu Ala Ile Val His Ala Val Phe Ala Leu Arg Ala
 130          135          140

Arg Thr Val Thr Phe Gly Val Ile Thr Ser Ile Val Thr Trp Gly Leu
 145          150          155          160

Ala Val Leu Ala Ala Leu Pro Glu Phe Ile Phe Tyr Glu Thr Glu Glu
          165          170          175

Leu Phe Glu Glu Thr Leu Cys Ser Ala Leu Tyr Pro Glu Asp Thr Val
 180          185          190

Tyr Ser Trp Arg His Phe His Thr Leu Arg Met Thr Ile Phe Cys Leu
 195          200          205

Val Leu Pro Leu Leu Val Met Ala Ile Cys Tyr Thr Gly Ile Ile Lys
 210          215          220

Thr Leu Leu Arg Cys Pro Ser Lys Lys Lys Tyr Lys Ala Lys Arg Leu
 225          230          235          240

Ile Phe Val Ile Met Ala Val Phe Phe Ile Phe Trp Thr Pro Tyr Asn
 245          250          255

Val Ala Ile Leu Leu Ser Ser Tyr Gln Ser Ile Leu Phe Gly Asn Asp
 260          265          270

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Cys Glu Arg Ser Lys His Leu Asp Leu Val Met Leu Val Thr Glu Val
275 280 285

Ile Ala Tyr Ser His Cys Cys Met Asn Pro Val Ile Tyr Ala Phe Val
290 295 300

Gly Glu Arg Phe Arg Lys Tyr Leu Arg His Phe Phe His Arg His Leu
305 310 315 320

Leu Met His Leu Gly Arg Tyr Ile Pro Phe Leu Pro Ser Glu Lys Leu
325 330 335

Glu Arg Thr Ser Ser Val Ser Pro Ser Thr Ala Glu Pro Glu Leu Ser
340 345 350

Ile Val Phe
355

<210> 476
<211> 1059
<212> DNA
<213> Homo sapiens

<400> 476
atggattatc aagtgtcaag tccaatctat gacatcaatt attatacatc ggagccctgc 60
caaaaaatca atgtgaagca aatcgcagcc cgcctcctgc ctccgctcta ctactgggtg 120
ttcatctttg gttttgtggg caacatgctg gtcacctca tcctgataaa ctgcaaaagg 180
ctgaagagca tgactgacat ctacctgctc aacctggcca tctctgacct gtttttcctt 240
cttactgtcc ctttctgggc tcaactatgct gccgccagc gggactttgg aaatacaatg 300
tgtcaactct tgacagggct ctatcttata ggcttcttct ctggaatctt cttoatcatc 360
ctcctgacaa togataggta cctggctgtc gtccatgctg tgtttgcttt aaaagccagg 420
acggtcacct ttgggggtgg gacaagtgtg atcacttggg tgggtggctgt gtttgctgtc 480
ctcccaggaa tcatctttac cagatctcaa aaagaaggct ttcattacac ctgcagctct 540
cattttccat acagtcagta tcaattctgg aagaatttcc agacattaaa gatagtcac 600
ttggggctgg tcctgccgct gcttgtcatg gtcactgct actcgggaat cctaaaaact 660
ctgcttcggg gtogaaatga gaagaagagg cacagggcta agaggcttat cttcaccatc 720
atgattgttt attttctctt ctgggctccc tacaacattg tccttctcct gaacaccttc 780
caggaattct ttggcctgaa taattgcagt agctctaaca ggttggaaca agctatgcag 840
gtgacagaga ctcttgggat gacgcaactg tgcacaaacc ccatcatcta tgcctttgtc 900
ggggagaaat tcagaaacta cctcttagtc ttcttccaaa agcacattgc caaacgcttc 960
tgcaaatgct gttctatctt ccagcaagag gctcccgagc gagcaagctc agtttacacc 1020
cgatccactg gggagcagga aatatctgtg ggcttgtga 1059

<210> 477
<211> 352
<212> PRT
<213> Homo sapiens

<400> 477
Met Asp Tyr Gln Val Ser Ser Pro Ile Tyr Asp Ile Asn Tyr Tyr Thr
1 5 10 15

Ser Glu Pro Cys Gln Lys Ile Asn Val Lys Gln Ile Ala Ala Arg Leu
20 25 30

Leu Pro Pro Leu Tyr Ser Leu Val Phe Ile Phe Gly Phe Val Gly Asn
 35 40 45
 Met Leu Val Ile Leu Ile Leu Ile Asn Cys Lys Arg Leu Lys Ser Met
 50 55 60
 Thr Asp Ile Tyr Leu Leu Asn Leu Ala Ile Ser Asp Leu Phe Phe Leu
 65 70 75 80
 Leu Thr Val Pro Phe Trp Ala His Tyr Ala Ala Ala Gln Trp Asp Phe
 85 90 95
 Gly Asn Thr Met Cys Gln Leu Leu Thr Gly Leu Tyr Phe Ile Gly Phe
 100 105 110
 Phe Ser Gly Ile Phe Phe Ile Ile Leu Leu Thr Ile Asp Arg Tyr Leu
 115 120 125
 Ala Val Val His Ala Val Phe Ala Leu Lys Ala Arg Thr Val Thr Phe
 130 135 140
 Gly Val Val Thr Ser Val Ile Thr Trp Val Val Ala Val Phe Ala Ser
 145 150 155 160
 Leu Pro Gly Ile Ile Phe Thr Arg Ser Gln Lys Glu Gly Leu His Tyr
 165 170 175
 Thr Cys Ser Ser His Phe Pro Tyr Ser Gln Tyr Gln Phe Trp Lys Asn
 180 185 190
 Phe Gln Thr Leu Lys Ile Val Ile Leu Gly Leu Val Leu Pro Leu Leu
 195 200 205
 Val Met Val Ile Cys Tyr Ser Gly Ile Leu Lys Thr Leu Leu Arg Cys
 210 215 220
 Arg Asn Glu Lys Lys Arg His Arg Ala Lys Arg Leu Ile Phe Thr Ile
 225 230 235 240
 Met Ile Val Tyr Phe Leu Phe Trp Ala Pro Tyr Asn Ile Val Leu Leu
 245 250 255
 Leu Asn Thr Phe Gln Glu Phe Phe Gly Leu Asn Asn Cys Ser Ser Ser
 260 265 270
 Asn Arg Leu Asp Gln Ala Met Gln Val Thr Glu Thr Leu Gly Met Thr
 275 280 285
 His Cys Cys Ile Asn Pro Ile Ile Tyr Ala Phe Val Gly Glu Lys Phe
 290 295 300
 Arg Asn Tyr Leu Leu Val Phe Phe Gln Lys His Ile Ala Lys Arg Phe
 305 310 315 320
 Cys Lys Cys Cys Ser Ile Phe Gln Gln Glu Ala Pro Glu Arg Ala Ser
 325 330 335

Ser Val Tyr Thr Arg Ser Thr Gly Glu Gln Glu Ile Ser Val Gly Leu
 340 345 350

<210> 478
 <211> 1068
 <212> DNA
 <213> Homo sapiens

<400> 478
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 ttttattgcc tcctgtttgt attcagtcctt ctgggaaaca gcctggatcat cctggtcctt 180
 gtgggtctgca agaagctgag gagcatcaca gatgtatacc tcttgaacct ggccctgtct 240
 gacctgcttt ttgtcttctc ctcccccttt cagacctact atctgctgga ccagtgggtg 300
 tttgggaactg taatgtgcaa agtgggtgtct ggcttttatt acattggctt ctacagcagc 360
 atgtttttca tcacctcat gagtgtggac aggtacctgg ctgttgtcca tgccgtgtat 420
 gccctaaagg tgaggacgat caggatgggc acaacgctgt gcctggcagt atggctaacc 480
 gccattatgg ctaccatccc attgctagtg ttttaccagg tggcctctga agatgggtgtt 540
 ctacagtgtt attcatttta caatcaacag actttgaagt ggaagatctt caccaacttc 600
 aaaatgaaca ttttaggctt gttgatccca ttcaccatct ttatgttctg ctacattaaa 660
 atcctgcacc agctgaagag gtgtcaaaac cacaacaaga ccaaggccaa gaggttggtg 720
 ctcattgtgg tcattgcata ttactttttc tgggtcccat tcaacgtggg tcttttcctc 780
 acttccttgc acagtatgca catcttgat ggatgtagca taagccaaca gctgacttat 840
 gccacccatg tcacagaaat catttccttt actcactgct gtgtgaaccc tgttatctat 900
 gcttttgttg gggagaagtt caagaaacac ctctcagaaa tatttcagaa aagttgcagc 960
 caaatcttca actacctagg aagacaaatg cctagggaga gctgtgaaaa gtcacatcatc 1020
 tgccagcagc actcctcccg ttcctccagc gtagactaca ttttgtga 1068

<210> 479
 <211> 355
 <212> PRT
 <213> Homo sapiens

<400> 479
 Met Asp Tyr Thr Leu Asp Leu Ser Val Thr Thr Val Thr Asp Tyr Tyr
 1 5 10 15
 Tyr Pro Asp Ile Phe Ser Ser Pro Cys Asp Ala Glu Leu Ile Gln Thr
 20 25 30
 Asn Gly Lys Leu Leu Leu Ala Val Phe Tyr Cys Leu Leu Phe Val Phe
 35 40 45
 Ser Leu Leu Gly Asn Ser Leu Val Ile Leu Val Leu Val Val Cys Lys
 50 55 60
 Lys Leu Arg Ser Ile Thr Asp Val Tyr Leu Leu Asn Leu Ala Leu Ser
 65 70 75 80
 Asp Leu Leu Phe Val Phe Ser Phe Pro Phe Gln Thr Tyr Tyr Leu Leu
 85 90 95

<400> 480

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atgacaccca cagacttcac aagccctatt cctaacatgg ctgatgacta tggctctgaa 60
tccacatctt ccatggaaga ctacgttaac ttcaacttca ctgacttota ctgtgagaaa 120
aacaatgtca ggcagtttgc gagccatttc ctcccaccct tgtactggct cgtgttcac 180
gtgggtgcct tgggcaacag tcttgttatc cttgtctact ggtactgcac aagagtgaag 240
accatgaccg acatgttcct tttgaatttg gcaattgctg acctcctctt tcttgctact 300
cttcccttct gggccattgc tgctgctgac cagtggaggt tccagacctt catgtgcaag 360
gtggtcaaca gcatgtacaa gatgaacttc tacagctgtg tgttgctgat catgtgcatc 420
agcgtggaca ggtacattgc cattgccacg gccatgagag cacatacttg gagggagaaa 480
aggcttttgt acagcaaaat ggtttgcttt accatctggg tattggcagc tgctctctgc 540
atcccagaaa tcttatacag ccaaatcaag gaggaatccg gcattgctat ctgcaccatg 600
gtttacccta gcatgagag caccaaactg aagtcagctg tcttgaccct gaaggtcatt 660
ctggggttct tcttccctt cgtggctcat gcttgctgct ataccatcat cattcacacc 720
ctgatacaag ccaagaagtc ttccaagcac aaagccaaaa aagtgacat cactgtcctg 780
accgtctttg tcttgctcct gtttccctac aactgcattt tgttggtgca gaccattgac 840
gcctatgcca tgttcatttc caactgtgcc gtttccacca acattgacat ctgcttccag 900
gtcaccacga ccatgcctt cttccacagt tgcctgaacc ctgttctcta tgtttttgtg 960
ggtgagagat tccgccggga tctcgtgaaa accctgaaga acttgggttg catcagccag 1020
gccagtgagg tttcatttac aaggagagag ggaagcttga agctgtcgtc tatgttgctg 1080
gagacaacct caggagcact ctccctctga 1110

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<210> 481

<211> 369

<212> PRT

<213> Homo sapiens

<400> 481

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Met Thr Pro Thr Asp Phe Thr Ser Pro Ile Pro Asn Met Ala Asp Asp
 1             5             10            15

Tyr Gly Ser Glu Ser Thr Ser Ser Met Glu Asp Tyr Val Asn Phe Asn
      20             25             30

Phe Thr Asp Phe Tyr Cys Glu Lys Asn Asn Val Arg Gln Phe Ala Ser
      35             40             45

His Phe Leu Pro Pro Leu Tyr Trp Leu Val Phe Ile Val Gly Ala Leu
      50             55             60

Gly Asn Ser Leu Val Ile Leu Val Tyr Trp Tyr Cys Thr Arg Val Lys
      65             70             75             80

Thr Met Thr Asp Met Phe Leu Leu Asn Leu Ala Ile Ala Asp Leu Leu
      85             90             95

Phe Leu Val Thr Leu Pro Phe Trp Ala Ile Ala Ala Ala Asp Gln Trp
      100            105            110

Lys Phe Gln Thr Phe Met Cys Lys Val Val Asn Ser Met Tyr Lys Met
      115            120            125

Asn Phe Tyr Ser Cys Val Leu Leu Ile Met Cys Ile Ser Val Asp Arg
      130            135            140

Tyr Ile Ala Ile Ala Gln Ala Met Arg Ala His Thr Trp Arg Glu Lys
      145            150            155            160

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tttctgcggc tcaggagcat ccggtgcctg cgaacatca tccactggaa cctcatctcc 480
gccttcatcc tgcgcaacgc cacctgggtc gtggtccagc taaccatgag ccccgaggtc 540
caccagagca acgtgggctg gtgcagggtg gtgacagccg cctacaacta cttccatgtg 600
accaacttct tctggatggt cggcgagggc tgctacctgc acacagccat cgtgctcacc 660
tactccactg accggctgcg caaatggatg ttcatctgca ttggctgggg tgtgcccttc 720
cccatcattg tggcctgggc cattgggaag ctgtactacg acaatgagaa gtgctggttt 780
ggcaaaaggc ctgggggtga caccgactac atctaccagg gcccatgat cctggtcctg 840
ctgatcaatt tcatcttcct tttcaacatc gtccgcatcc tcatgaccaa gctccgggca 900
tccaccacgt ctgagaccat tcagtacagg aaggctgtga aagcccctct ggtgctgctg 960
cccctcctgg gcatcaccta catgctgttc ttcgtcaatc ccggggagga tgaggctctcc 1020
cgggtcgtct tcatctactt caactccttc ctggaatcct tccagggtt ctttgtgtct 1080
gtgttctact gtttcctcaa tagtgaggtc cgttctgcc tccggaagag gtggcaccgg 1140
tggcaggaca agcactcgat ccgtgccga gtggcccggt ccatgtccat ccccacctcc 1200
ccaaccctgt tcagctttca cagcatcaag cagtccacag cagtctga 1248

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<210> 483
 <211> 415
 <212> PRT
 <213> Homo sapiens

<400> 483

```

Met Gly Gly His Pro Gln Leu Arg Leu Val Lys Ala Leu Leu Leu Leu
  1              5              10              15

Gly Leu Asn Pro Val Ser Ala Ser Leu Gln Asp Gln His Cys Glu Ser
      20              25              30

Leu Ser Leu Ala Ser Asn Ile Ser Gly Leu Gln Cys Asn Ala Ser Val
      35              40              45

Asp Leu Ile Gly Thr Cys Trp Pro Arg Ser Pro Ala Gly Gln Leu Val
      50              55              60

Val Arg Pro Cys Pro Ala Phe Phe Tyr Gly Val Arg Tyr Asn Thr Thr
      65              70              75              80

Asn Asn Gly Tyr Arg Glu Cys Leu Ala Asn Gly Ser Trp Ala Ala Arg
      85              90              95

Val Asn Tyr Ser Glu Cys Gln Glu Ile Leu Asn Glu Glu Lys Lys Ser
      100              105              110

Lys Val His Tyr His Val Ala Val Ile Ile Asn Tyr Leu Gly His Cys
      115              120              125

Ile Ser Leu Val Ala Leu Leu Val Ala Phe Val Leu Phe Leu Arg Leu
      130              135              140

Arg Ser Ile Arg Cys Leu Arg Asn Ile Ile His Trp Asn Leu Ile Ser
      145              150              155              160

Ala Phe Ile Leu Arg Asn Ala Thr Trp Phe Val Val Gln Leu Thr Met
      165              170              175

Ser Pro Glu Val His Gln Ser Asn Val Gly Trp Cys Arg Leu Val Thr
      180              185              190

```

Ala	Ala	Tyr	Asn	Tyr	Phe	His	Val	Thr	Asn	Phe	Phe	Trp	Met	Phe	Gly
		195					200					205			
Glu	Gly	Cys	Tyr	Leu	His	Thr	Ala	Ile	Val	Leu	Thr	Tyr	Ser	Thr	Asp
	210					215					220				
Arg	Leu	Arg	Lys	Trp	Met	Phe	Ile	Cys	Ile	Gly	Trp	Gly	Val	Pro	Phe
225					230					235					240
Pro	Ile	Ile	Val	Ala	Trp	Ala	Ile	Gly	Lys	Leu	Tyr	Tyr	Asp	Asn	Glu
				245					250					255	
Lys	Cys	Trp	Phe	Gly	Lys	Arg	Pro	Gly	Val	Tyr	Thr	Asp	Tyr	Ile	Tyr
			260					265					270		
Gln	Gly	Pro	Met	Ile	Leu	Val	Leu	Leu	Ile	Asn	Phe	Ile	Phe	Leu	Phe
		275					280					285			
Asn	Ile	Val	Arg	Ile	Leu	Met	Thr	Lys	Leu	Arg	Ala	Ser	Thr	Thr	Ser
	290					295					300				
Glu	Thr	Ile	Gln	Tyr	Arg	Lys	Ala	Val	Lys	Ala	Pro	Leu	Val	Leu	Leu
305					310					315					320
Pro	Leu	Leu	Gly	Ile	Thr	Tyr	Met	Leu	Phe	Phe	Val	Asn	Pro	Gly	Glu
				325					330					335	
Asp	Glu	Val	Ser	Arg	Val	Val	Phe	Ile	Tyr	Phe	Asn	Ser	Phe	Leu	Glu
			340					345					350		
Ser	Phe	Gln	Gly	Phe	Phe	Val	Ser	Val	Phe	Tyr	Cys	Phe	Leu	Asn	Ser
		355					360					365			
Glu	Val	Arg	Ser	Ala	Ile	Arg	Lys	Arg	Trp	His	Arg	Trp	Gln	Asp	Lys
	370					375					380				
His	Ser	Ile	Arg	Ala	Arg	Val	Ala	Arg	Ala	Met	Ser	Ile	Pro	Thr	Ser
385					390					395					400
Pro	Thr	Arg	Val	Ser	Phe	His	Ser	Ile	Lys	Gln	Ser	Thr	Ala	Val	
				405					410					415	

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<210> 484
<211> 1059
<212> DNA
<213> Homo sapiens
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gccaccaaca gtcagaggcc aaggaagctg ttggctgaaa aggtggtcta tgttggcgtc 480
tggatccctg ccctcctgct gactattccc gacttcatct ttgccaacgt cagtgaggca 540
gatgacagat atatctgtga ccgcttctac cccaatgact tgtgggtggt tgtgttccag 600
tttcagcaca tcatggttgg ccttatcctg cctgggtattg tcatcctgtc ctgctattgc 660
attatcatct ccaagctgtc aactccaag ggccaccaga agcgcaaggc caagaagacc 720
acagtcatcc tcatcctggc tttcttcgcc tgttggctgc cttactacat tgggatcagc 780
atcgactcct tcatcctcct ggaaatcatc aagcaagggt gtgagtttga gaacactgtg 840
cacaagtgga tttccatcac cgaggcccta gctttcttcc actgttgtct gaaccccatc 900
ctctatgctt tccttggagc caaatttaaa acctctgccc agcacgcact cacctctgtg 960
agcagagggt ccagcctcaa gatcctctcc aaaggaaaagc gaggtggaca ttcattctgtt 1020
tccactgagt ctgagtcctc aagttttcac tccagctaa 1059

```

<210> 485

<211> 352

<212> PRT

<213> Homo sapiens

<400> 485

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Met Glu Gly Ile Ser Ile Tyr Thr Ser Asp Asn Tyr Thr Glu Glu Met
  1             5             10             15

Gly Ser Gly Asp Tyr Asp Ser Met Lys Glu Pro Cys Phe Arg Glu Glu
      20             25             30

Asn Ala Asn Phe Asn Lys Ile Phe Leu Pro Thr Ile Tyr Ser Ile Ile
      35             40             45

Phe Leu Thr Gly Ile Val Gly Asn Gly Leu Val Ile Leu Val Met Gly
      50             55             60

Tyr Gln Lys Lys Leu Arg Ser Met Thr Asp Lys Tyr Arg Leu His Leu
      65             70             75             80

Ser Val Ala Asp Leu Leu Phe Val Ile Thr Leu Pro Phe Trp Ala Val
      85             90             95

Asp Ala Val Ala Asn Trp Tyr Phe Gly Asn Phe Leu Cys Lys Ala Val
      100            105            110

His Val Ile Tyr Thr Val Asn Leu Tyr Ser Ser Val Leu Ile Leu Ala
      115            120            125

Phe Ile Ser Leu Asp Arg Tyr Leu Ala Ile Val His Ala Thr Asn Ser
      130            135            140

Gln Arg Pro Arg Lys Leu Leu Ala Glu Lys Val Val Tyr Val Gly Val
      145            150            155            160

Trp Ile Pro Ala Leu Leu Leu Thr Ile Pro Asp Phe Ile Phe Ala Asn
      165            170            175

Val Ser Glu Ala Asp Asp Arg Tyr Ile Cys Asp Arg Phe Tyr Pro Asn
      180            185            190

Asp Leu Trp Val Val Val Phe Gln Phe Gln His Ile Met Val Gly Leu
      195            200            205

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Ile Leu Pro Gly Ile Val Ile Leu Ser Cys Tyr Cys Ile Ile Ile Ser
 210 215 220

Lys Leu Ser His Ser Lys Gly His Gln Lys Arg Lys Ala Lys Lys Thr
 225 230 235 240

Thr Val Ile Leu Ile Leu Ala Phe Phe Ala Cys Trp Leu Pro Tyr Tyr
 245 250 255

Ile Gly Ile Ser Ile Asp Ser Phe Ile Leu Leu Glu Ile Ile Lys Gln
 260 265 270

Gly Cys Glu Phe Glu Asn Thr Val His Lys Trp Ile Ser Ile Thr Glu
 275 280 285

Ala Leu Ala Phe Phe His Cys Cys Leu Asn Pro Ile Leu Tyr Ala Phe
 290 295 300

Leu Gly Ala Lys Phe Lys Thr Ser Ala Gln His Ala Leu Thr Ser Val
 305 310 315 320

Ser Arg Gly Ser Ser Leu Lys Ile Leu Ser Lys Gly Lys Arg Gly Gly
 325 330 335

His Ser Ser Val Ser Thr Glu Ser Glu Ser Ser Ser Phe His Ser Ser
 340 345 350

<210> 486
 <211> 1341
 <212> DNA
 <213> Homo sapiens

<400> 486
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 aacacgctgg tctgtgctgc cgttatcagg ttccgacacc tgcggtccaa ggtgaccaac 180
 ttctttgtca tctccttggc tgtgtcagat ctcttgggtg cgcctcctgg catgccctgg 240
 aaggcagtgg ctgagattgc tggcttcttg ccctttgggt ccttctgtaa catctgggtg 300
 gcctttgaca tcatgtgctc cactgcatcc atcctcaacc tctgtgtgat cagcgtggac 360
 aggtattggg ctatctccag ccctttccgg tatgagagaa agatgacccc caaggcagcc 420
 ttcacacctga tcagtgtggc atggaccttg tctgtactca tctccttcat ccagtgagc 480
 ctgagctggc acaaggcaaa acccacaagc ccctctgatg gaaatgccac ttccctggct 540
 gagaccatag acaactgtga ctccagcctc agcaggacat atgccatctc atcctctgta 600
 ataagctttt acatccctgt ggccatcatg attgtcacct acaccaggat ctacaggatt 660
 gctcagaaac aaatacggcg cattgcgggc ttggagaggg cagcagtcca cgccaagaat 720
 tgccagacca ccacaggtaa tggaaagcct gtcgaatgtt ctcaaccgga aagttctttt 780
 aagatgtcct tcaaaagaga aactaaagtc aagaagactc tgtcgggtgat catgggtgtg 840
 tttgtgtgct gttggctacc tttcttcatc ttgaactgca ttttgccctt ctgtgggtct 900
 ggggagacgc agcccttctg cattgattcc aacacctttg acgtgtttgt gtggtttggg 960
 tgggctaatt catccttgaa ccccatcatt tatgccttta atgctgattt tcggaaggca 1020
 ttttcaaccc tcttaggatg ctacagactt tgccctgcga cgaataatgc catagagacg 1080
 gtgagtatca ataacaatgg ggccgcgatg ttttccagcc atcatgagcc acgaggctcc 1140

atctccaagg agtgcaatct ggtttacctg atcccacatg ctgtgggctc ctctgaggac 1200
 ctgaaaaagg aggaggcagc tggcatcgcc agacccttgg agaagctgtc cccagcccta 1260
 tcggtcatat tggactatga cactgacgtc tctctggaga agatccaacc catgacacaa 1320
 aacggtcagc acccaacctg a 1341

<210> 487
 <211> 446
 <212> PRT
 <213> Homo sapiens

<400> 487

Met	Arg	Thr	Leu	Asn	Thr	Ser	Ala	Met	Asp	Gly	Thr	Gly	Leu	Val	Val	1	5	10	15
Glu	Arg	Asp	Phe	Ser	Val	Arg	Ile	Leu	Thr	Ala	Cys	Phe	Leu	Ser	Leu	20	25	30	
Leu	Ile	Leu	Ser	Thr	Leu	Leu	Gly	Asn	Thr	Leu	Val	Cys	Ala	Ala	Val	35	40	45	
Ile	Arg	Phe	Arg	His	Leu	Arg	Ser	Lys	Val	Thr	Asn	Phe	Phe	Val	Ile	50	55	60	
Ser	Leu	Ala	Val	Ser	Asp	Leu	Leu	Val	Ala	Val	Leu	Val	Met	Pro	Trp	65	70	75	80
Lys	Ala	Val	Ala	Glu	Ile	Ala	Gly	Phe	Trp	Pro	Phe	Gly	Ser	Phe	Cys	85	90	95	
Asn	Ile	Trp	Val	Ala	Phe	Asp	Ile	Met	Cys	Ser	Thr	Ala	Ser	Ile	Leu	100	105	110	
Asn	Leu	Cys	Val	Ile	Ser	Val	Asp	Arg	Tyr	Trp	Ala	Ile	Ser	Ser	Pro	115	120	125	
Phe	Arg	Tyr	Glu	Arg	Lys	Met	Thr	Pro	Lys	Ala	Ala	Phe	Ile	Leu	Ile	130	135	140	
Ser	Val	Ala	Trp	Thr	Leu	Ser	Val	Leu	Ile	Ser	Phe	Ile	Pro	Val	Gln	145	150	155	160
Leu	Ser	Trp	His	Lys	Ala	Lys	Pro	Thr	Ser	Pro	Ser	Asp	Gly	Asn	Ala	165	170	175	
Thr	Ser	Leu	Ala	Glu	Thr	Ile	Asp	Asn	Cys	Asp	Ser	Ser	Leu	Ser	Arg	180	185	190	
Thr	Tyr	Ala	Ile	Ser	Ser	Ser	Val	Ile	Ser	Phe	Tyr	Ile	Pro	Val	Ala	195	200	205	
Ile	Met	Ile	Val	Thr	Tyr	Thr	Arg	Ile	Tyr	Arg	Ile	Ala	Gln	Lys	Gln	210	215	220	
Ile	Arg	Arg	Ile	Ala	Ala	Leu	Glu	Arg	Ala	Ala	Val	His	Ala	Lys	Asn	225	230	235	240

Cys Gln Thr Thr Thr Gly Asn Gly Lys Pro Val Glu Cys Ser Gln Pro
245 250 255

Glu Ser Ser Phe Lys Met Ser Phe Lys Arg Glu Thr Lys Val Lys Lys
260 265 270

Thr Leu Ser Val Ile Met Gly Val Phe Val Cys Cys Trp Leu Pro Phe
275 280 285

Phe Ile Leu Asn Cys Ile Leu Pro Phe Cys Gly Ser Gly Glu Thr Gln
290 295 300

Pro Phe Cys Ile Asp Ser Asn Thr Phe Asp Val Phe Val Trp Phe Gly
305 310 315 320

Trp Ala Asn Ser Ser Leu Asn Pro Ile Ile Tyr Ala Phe Asn Ala Asp
325 330 335

Phe Arg Lys Ala Phe Ser Thr Leu Leu Gly Cys Tyr Arg Leu Cys Pro
340 345 350

Ala Thr Asn Asn Ala Ile Glu Thr Val Ser Ile Asn Asn Asn Gly Ala
355 360 365

Ala Met Phe Ser Ser His His Glu Pro Arg Gly Ser Ile Ser Lys Glu
370 375 380

Cys Asn Leu Val Tyr Leu Ile Pro His Ala Val Gly Ser Ser Glu Asp
385 390 395 400

Leu Lys Lys Glu Glu Ala Ala Gly Ile Ala Arg Pro Leu Glu Lys Leu
405 410 415

Ser Pro Ala Leu Ser Val Ile Leu Asp Tyr Asp Thr Asp Val Ser Leu
420 425 430

Glu Lys Ile Gln Pro Met Thr Gln Asn Gly Gln His Pro Thr
435 440 445

<210> 488
<211> 1332
<212> DNA
<213> Homo sapiens

<400> 488
atggatccac tgaatctgtc ctggtatgat gatgatctgg agaggcagaa ctggagccgg 60
cccttcaacg ggtcagacgg gaaggcggac agacccact acaactacta tgccacacgg 120
ctcaccctgc tcatgctgt catcgtcttc ggcaacgtgc tgggtgtgcat ggctgtgtcc 180
cgcgagaagg cgctgcagac caccaccaac tacctgatcg tcagccttgc agtggccgac 240
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aaattcagca ggattcactg tgacatcttc gtcactctgg acgtcatgat gtgcacggcg 360
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ctgtacaata cgcgctacag ctccaagcgc cgggtcaccg tcatgatctc catcgtcttg 480
gtcctgtcct tcaccatctc ctgcccactc ctcttcggac tcaataacgc agaccagaac 540
gagtgcacga ttgccaaacc ggccttcgtg gtctactcct ccatcgtctc cttctacgtg 600
cccttcattg tcaccctgct ggtctacatc aagatctaca ttgtcctccg cagacgccgc 660

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aagcgagtca acaccaaacg cagcagccga gctttcaggg cccacctgag ggctccacta 720
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agccaccacc agctgactct ccccgaccg tcccaccatg gtctccacag cactcccgac 960
agccccgcca aaccagagaa gaatgggcat gccaaagacc accccaagat tgccaagatc 1020
tttgagatcc agaccatgcc caatggcaaa acccgacct cctcaagac catgagccgt 1080
aggaagctct cccagcagaa ggagaagaaa gccaatcaga tgctcgccat tgttctcggc 1140
gtgttcatca tctgctggct gcccttcttc atcacacaca tctgaacat acactgtgac 1200
tgcaacatcc cgcctgtcct gtacagcgcc ttcacgtggc tgggctatgt caacagcgcc 1260
gtgaacccca tcatctacac caccttcaac attgagttcc gcaaggcctt cctgaagatc 1320
ctccactgct ga 1332

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<210> 489
 <211> 443
 <212> PRT
 <213> Homo sapiens

<400> 489

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Met Asp Pro Leu Asn Leu Ser Trp Tyr Asp Asp Asp Leu Glu Arg Gln
  1              5              10              15

Asn Trp Ser Arg Pro Phe Asn Gly Ser Asp Gly Lys Ala Asp Arg Pro
      20              25              30

His Tyr Asn Tyr Tyr Ala Thr Arg Leu Thr Leu Leu Ile Ala Val Ile
      35              40              45

Val Phe Gly Asn Val Leu Val Cys Met Ala Val Ser Arg Glu Lys Ala
      50              55              60

Leu Gln Thr Thr Thr Asn Tyr Leu Ile Val Ser Leu Ala Val Ala Asp
      65              70              75              80

Leu Leu Val Ala Thr Leu Val Met Pro Trp Val Val Tyr Leu Glu Val
      85              90              95

Val Gly Glu Trp Lys Phe Ser Arg Ile His Cys Asp Ile Phe Val Thr
      100              105              110

Leu Asp Val Met Met Cys Thr Ala Ser Ile Leu Asn Leu Cys Ala Ile
      115              120              125

Ser Ile Asp Arg Tyr Thr Ala Val Ala Met Pro Met Leu Tyr Asn Thr
      130              135              140

Arg Tyr Ser Ser Lys Arg Arg Val Thr Val Met Ile Ser Ile Val Trp
      145              150              155              160

Val Leu Ser Phe Thr Ile Ser Cys Pro Leu Leu Phe Gly Leu Asn Asn
      165              170              175

Ala Asp Gln Asn Glu Cys Ile Ile Ala Asn Pro Ala Phe Val Val Tyr
      180              185              190

Ser Ser Ile Val Ser Phe Tyr Val Pro Phe Ile Val Thr Leu Leu Val

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	165		170		175										
Asp	Pro	Thr	Val	Cys	Ser	Ile	Ser	Asn	Pro	Asp	Phe	Val	Ile	Tyr	Ser
	180							185					190		
Ser	Val	Val	Ser	Phe	Tyr	Leu	Pro	Phe	Gly	Val	Thr	Val	Leu	Val	Tyr
	195						200						205		
Ala	Arg	Ile	Tyr	Val	Val	Leu	Lys	Gln	Arg	Arg	Arg	Lys	Arg	Ile	Leu
	210					215					220				
Thr	Arg	Gln	Asn	Ser	Gln	Cys	Asn	Ser	Val	Arg	Pro	Gly	Phe	Pro	Gln
225					230					235					240
Gln	Thr	Leu	Ser	Pro	Asp	Pro	Ala	His	Leu	Glu	Leu	Lys	Arg	Tyr	Tyr
			245						250					255	
Ser	Ile	Cys	Gln	Asp	Thr	Ala	Leu	Gly	Gly	Pro	Gly	Phe	Gln	Glu	Arg
		260						265					270		
Gly	Gly	Glu	Leu	Lys	Arg	Glu	Glu	Lys	Thr	Arg	Asn	Ser	Leu	Ser	Pro
		275					280					285			
Thr	Ile	Ala	Pro	Lys	Leu	Ser	Leu	Glu	Val	Arg	Lys	Leu	Ser	Asn	Gly
	290					295					300				
Arg	Leu	Ser	Thr	Ser	Leu	Lys	Leu	Gly	Pro	Leu	Gln	Pro	Arg	Gly	Val
305					310					315					320
Pro	Leu	Arg	Glu	Lys	Lys	Ala	Lys	Gln	Met	Val	Ala	Ile	Val	Leu	Gly
				325					330					335	
Ala	Phe	Ile	Val	Cys	Trp	Leu	Pro	Phe	Phe	Leu	Thr	His	Val	Leu	Asn
			340					345					350		
Thr	His	Cys	Gln	Thr	Cys	His	Val	Ser	Pro	Glu	Leu	Tyr	Ser	Ala	Thr
	355						360					365			
Thr	Trp	Leu	Gly	Tyr	Val	Asn	Ser	Ala	Leu	Asn	Pro	Val	Ile	Tyr	Thr
	370					375					380				
Thr	Phe	Asn	Ile	Glu	Phe	Arg	Lys	Ala	Phe	Leu	Lys	Ile	Leu	Ser	Cys
385					390					395					400

<210> 492
 <211> 1434
 <212> DNA
 <213> Homo sapiens

<400> 492
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 ctggcgcagg ggaacgccgt ggggggctcg gcgggggcac cgccactggg gccctcacag 120
 gtggtcaccg cctgcctgct gaccctactc atcatctgga cctgctggg caacgtgctg 180

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gtgtgcgag ccactgtgag gagcgcgcac ctgctgagca acatgaccaa cgtcttcac 240
gtgtctctgg ccgtgtctga ccttttctgt gcgtgtctgg tcatgccctg gaaggcagtc 300
gccgaggtgg ccggttactg gccctttgga gcgttctgag acgtctgggt ggccttcgac 360
atcatgtgct ccactgcctc catcctgaac ctgtgctgca tcagcgtgga ccgctactgg 420
gccatctcca ggcccttcgg ctacaagcgc aagatgactc agcgcagtcg cttgggtcatg 480
gtcggcctgg catggacctt gtccatcctc atctccttca ttccggtcca gctcaactgg 540
cacagggacc aggcggcctc ttggggcggg ctggacctgc caaacaacct ggccaactgg 600
acgccctggg aggaggactt ttggggagccc gacgtgaatg cagagaactg tgactccagc 660
ctgaatcgaa cctacgccat ctcttcctcg ctcatcagct tctacatccc cgttgccatc 720
atgatcgtga cctacacgag catctaccgc atcgcccagg tgcagatccg caggatttcc 780
tccctggaga gggcgcgaga gcacgcgcag agctgccgga gcagcgcagc ctgctgcccc 840
gacaccagcc tgcgcgcttc catcaagaag gagaccaagg ttaaaaagac cctgtcgggtg 900
atcatggggg tcttcgtgtg ttgctggctg ccttcttca tcttaactg catggctcct 960
ttctgcagtg gacaccctga aggccttcgg gccggcttcc cctgctcag tgagaccacc 1020
ttcagcgtct tcgtctggtt cggctgggct aactcctcac tcaaccccg catctatgcc 1080
ttcaacgccc actttcagaa ggtgtttgcc cagctgctgg ggtgcagcca cttctgctcc 1140
cgacgcgcgg tggagacggt gaacatcagc aatgagctca tctcctacaa ccaagacatc 1200
gtcttccaca aggaaatcgc agctgcctac atccacatga tgcccaacgc cgttaccccc 1260
ggcaaccggg aggtggacaa cgacgaggag gagggctcct tcgatcgcat gttccagatc 1320
tatcagacgt cccagatgg tgacctgtt gctgagctct tctgggagct ggactgcgag 1380
ggggagattt ctttagacaa aataacacct ttcacccgca atggattcca ttaa 1434

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<210> 493
 <211> 477
 <212> PRT
 <213> Homo sapiens

<400> 493
 Met Leu Pro Pro Gly Ser Asn Gly Thr Ala Tyr Pro Gly Gln Phe Ala
 1 5 10 15
 Leu Tyr Gln Gln Leu Ala Gln Gly Asn Ala Val Gly Gly Ser Ala Gly
 20 25 30
 Ala Pro Pro Leu Gly Pro Ser Gln Val Val Thr Ala Cys Leu Leu Thr
 35 40 45
 Leu Leu Ile Ile Trp Thr Leu Leu Gly Asn Val Leu Val Cys Ala Ala
 50 55 60
 Ile Val Arg Ser Arg His Leu Arg Ala Asn Met Thr Asn Val Phe Ile
 65 70 75 80
 Val Ser Leu Ala Val Ser Asp Leu Phe Val Ala Leu Leu Val Met Pro
 85 90 95
 Trp Lys Ala Val Ala Glu Val Ala Gly Tyr Trp Pro Phe Gly Ala Phe
 100 105 110
 Cys Asp Val Trp Val Ala Phe Asp Ile Met Cys Ser Thr Ala Ser Ile
 115 120 125
 Leu Asn Leu Cys Val Ile Ser Val Asp Arg Tyr Trp Ala Ile Ser Arg
 130 135 140
 Pro Phe Arg Tyr Lys Arg Lys Met Thr Gln Arg Met Ala Leu Val Met

145		150		155		160
Val Gly Leu Ala Trp Thr Leu Ser Ile Leu Ile Ser Phe Ile Pro Val						
		165		170		175
Gln Leu Asn Trp His Arg Asp Gln Ala Ala Ser Trp Gly Gly Leu Asp						
		180		185		190
Leu Pro Asn Asn Leu Ala Asn Trp Thr Pro Trp Glu Glu Asp Phe Trp						
		195		200		205
Glu Pro Asp Val Asn Ala Glu Asn Cys Asp Ser Ser Leu Asn Arg Thr						
		210		215		220
Tyr Ala Ile Ser Ser Ser Leu Ile Ser Phe Tyr Ile Pro Val Ala Ile						
		225		230		235
Met Ile Val Thr Tyr Thr Arg Ile Tyr Arg Ile Ala Gln Val Gln Ile						
		245		250		255
Arg Arg Ile Ser Ser Leu Glu Arg Ala Ala Glu His Ala Gln Ser Cys						
		260		265		270
Arg Ser Ser Ala Ala Cys Ala Pro Asp Thr Ser Leu Arg Ala Ser Ile						
		275		280		285
Lys Lys Glu Thr Lys Val Lys Lys Thr Leu Ser Val Ile Met Gly Val						
		290		295		300
Phe Val Cys Cys Trp Leu Pro Phe Phe Ile Leu Asn Cys Met Val Pro						
		305		310		315
Phe Cys Ser Gly His Pro Glu Gly Pro Pro Ala Gly Phe Pro Cys Val						
		325		330		335
Ser Glu Thr Thr Phe Asp Val Phe Val Trp Phe Gly Trp Ala Asn Ser						
		340		345		350
Ser Leu Asn Pro Val Ile Tyr Ala Phe Asn Ala Asp Phe Gln Lys Val						
		355		360		365
Phe Ala Gln Leu Leu Gly Cys Ser His Phe Cys Ser Arg Thr Pro Val						
		370		375		380
Glu Thr Val Asn Ile Ser Asn Glu Leu Ile Ser Tyr Asn Gln Asp Ile						
		385		390		395
Val Phe His Lys Glu Ile Ala Ala Ala Tyr Ile His Met Met Pro Asn						
		405		410		415
Ala Val Thr Pro Gly Asn Arg Glu Val Asp Asn Asp Glu Glu Glu Gly						
		420		425		430
Pro Phe Asp Arg Met Phe Gln Ile Tyr Gln Thr Ser Pro Asp Gly Asp						
		435		440		445
Pro Val Ala Glu Ser Val Trp Glu Leu Asp Cys Glu Gly Glu Ile Ser						

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450                               455                               460
Leu Asp Lys Ile Thr Pro Phe Thr Pro Asn Gly Phe His
465                               470                               475

<210> 494
<211> 1284
<212> DNA
<213> Homo sapiens

<400> 494
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gataatcctg agagatacag cacaaatcta agcaatcatg tggatgattt caccactttt 120
cgtggcacag agctcagctt cctggttacc actcatcaac ccactaattt ggtoctaccc 180
agcaatggct caatgcacaa ctattgccc aagcagacta aaattacttc agctttcaaa 240
tacattaaca ctgtgatata ttgtactatt ttcacgtgg gaatgggtgg gaatgcaact 300
ctgctcagga tcatttacca gaacaaatgt atgaggaatg gcccacacgc gctgatagcc 360
agtottgccc ttggagacct tatctatgtg gtcattgatc tccctatcaa tgtatttaag 420
ctgctggctg ggcgctggcc ttttgatcac aatgactttg gcgtatttct ttgcaagctg 480
ttcccttttt tgcagaagtc ctcggtgggg atcaccgtcc tcaacctctg cgctcttagt 540
gttgacaggt acagagcagt tgcctcctgg agtcgtgttc aggggaattgg gattcctttg 600
gtaactgcca ttgaaattgt ctccatctgg atcctgtcct ttatcctggc cattcctgaa 660
gcgattggct tcgtcatggt accctttgaa tataggggtg aacagcataa aacctgtatg 720
ctcaatgcca catcaaaatt catggagttc taccaagatg taaaggactg gtggctcttc 780
gggtttctatt tctgtatgcc cttgggtgtgc actgcgatct tctacaccct catgacttgt 840
gagatgttga acagaaggaa tggcagcttg agaattgcc tcaagtgaaca tcttaagcag 900
cgtcgagaag tgaaaaaac agttttctgc ttggttgtaa tttttgctct ttgctggttc 960
cctcttcaact taagccgtat attgaagaaa actgtgtata acgaaatgga caagaaccga 1020
tgtgaattac ttagtttctt actgctcatg gattacatcg gtattaactt ggcaaccatg 1080
aattcatgta taaaccccat agctctgtat ttgtgagca agaaatttaa aaattgtttc 1140
cagtcgatgcc tctgctgctg ctgttaccag tccaaaagtc tgatgacctc ggtcccatg 1200
aacggaacaa gcatccagtg gaagaaccac gatcaaaaca accacaacac agaccggagc 1260
agccataagg acagcatgaa ctga                               1284

<210> 495
<211> 427
<212> PRT
<213> Homo sapiens

<400> 495
Met Glu Thr Leu Cys Leu Arg Ala Ser Phe Trp Leu Ala Leu Val Gly
  1              5              10              15

Cys Val Ile Ser Asp Asn Pro Glu Arg Tyr Ser Thr Asn Leu Ser Asn
      20              25              30

His Val Asp Asp Phe Thr Thr Phe Arg Gly Thr Glu Leu Ser Phe Leu
    35              40              45

Val Thr Thr His Gln Pro Thr Asn Leu Val Leu Pro Ser Asn Gly Ser
    50              55              60

Met His Asn Tyr Cys Pro Gln Gln Thr Lys Ile Thr Ser Ala Phe Lys
    65              70              75              80

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Tyr	Ile	Asn	Thr	Val 85	Ile	Ser	Cys	Thr	Ile 90	Phe	Ile	Val	Gly	Met 95	Val
Gly	Asn	Ala	Thr 100	Leu	Leu	Arg	Ile	Ile 105	Tyr	Gln	Asn	Lys	Cys 110	Met	Arg
Asn	Gly	Pro 115	Asn	Ala	Leu	Ile	Ala 120	Ser	Leu	Ala	Leu	Gly 125	Asp	Leu	Ile
Tyr	Val 130	Val	Ile	Asp	Leu	Pro 135	Ile	Asn	Val	Phe	Lys 140	Leu	Leu	Ala	Gly
Arg 145	Trp	Pro	Phe	Asp	His 150	Asn	Asp	Phe	Gly	Val 155	Phe	Leu	Cys	Lys	Leu 160
Phe	Pro	Phe	Leu	Gln 165	Lys	Ser	Ser	Val	Gly 170	Ile	Thr	Val	Leu	Asn 175	Leu
Cys	Ala	Leu	Ser 180	Val	Asp	Arg	Tyr	Arg 185	Ala	Val	Ala	Ser	Trp 190	Ser	Arg
Val	Gln	Gly 195	Ile	Gly	Ile	Pro	Leu 200	Val	Thr	Ala	Ile	Glu 205	Ile	Val	Ser
Ile	Trp 210	Ile	Leu	Ser	Phe	Ile 215	Leu	Ala	Ile	Pro	Glu 220	Ala	Ile	Gly	Phe
Val 225	Met	Val	Pro	Phe	Glu 230	Tyr	Arg	Gly	Glu	Gln 235	His	Lys	Thr	Cys	Met 240
Leu	Asn	Ala	Thr	Ser 245	Lys	Phe	Met	Glu	Phe 250	Tyr	Gln	Asp	Val	Lys 255	Asp
Trp	Trp	Leu	Phe 260	Gly	Phe	Tyr	Phe	Cys 265	Met	Pro	Leu	Val	Cys 270	Thr	Ala
Ile	Phe	Tyr 275	Thr	Leu	Met	Thr	Cys 280	Glu	Met	Leu	Asn	Arg 285	Arg	Asn	Gly
Ser 290	Leu	Arg	Ile	Ala	Leu	Ser 295	Glu	His	Leu	Lys	Gln 300	Arg	Arg	Glu	Val
Lys 305	Lys	Thr	Val	Phe	Cys 310	Leu	Val	Val	Ile	Phe 315	Ala	Leu	Cys	Trp	Phe 320
Pro	Leu	His	Leu	Ser 325	Arg	Ile	Leu	Lys	Lys 330	Thr	Val	Tyr	Asn	Glu 335	Met
Asp	Lys	Asn	Arg 340	Cys	Glu	Leu	Leu	Ser 345	Phe	Leu	Leu	Leu	Met 350	Asp	Tyr
Ile	Gly	Ile 355	Asn	Leu	Ala	Thr	Met 360	Asn	Ser	Cys	Ile	Asn 365	Pro	Ile	Ala
Leu	Tyr 370	Phe	Val	Ser	Lys	Lys 375	Phe	Lys	Asn	Cys	Phe	Gln	Ser	Cys	Leu

Cys Cys Cys Cys Tyr Gln Ser Lys Ser Leu Met Thr Ser Val Pro Met
385 390 395 400

Asn Gly Thr Ser Ile Gln Trp Lys Asn His Asp Gln Asn Asn His Asn
405 410 415

Thr Asp Arg Ser Ser His Lys Asp Ser Met Asn
420 425

<210> 496
<211> 1329
<212> DNA
<213> Homo sapiens

<400> 496
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ctgtcgcgga tctggggaga ggagagaggc ttcccgcccg acagggccac tccgcttttg 120
caaaccgcag agataatgac gccaccact aagaccttat ggcccaaggg ttccaacgcc 180
agtctggcgc ggtcggttggc acctgcgag gtgcctaaag gagacaggac ggcaggatct 240
ccgccacgca ccatctcccc tccccgtgc caaggacca tcgagatcaa ggagactttc 300
aaatacatca acacggttgt gtctgcctt gtgttcgtgc tggggatcat cgggaactcc 360
acacttctga gaattatcta caagaacaag tgcattgcga acggtcccaa tatcttgatc 420
gccagcttgg ctctgggaga cctgctgcac atcgtcattg acatccctat caatgtctac 480
aagctgctgg cagaggactg gccatttgga gctgagatgt gtaagctggg gcctttcata 540
cagaaagcct ccgtgggaat cactgtgctg agtctatgtg ctctgagtat tgacagatat 600
cgagctgttg cttcttgagg tagaattaaa ggaattgggg ttccaaaatg gacagcagta 660
gaaattgttt tgatttgggt ggtctctgtg gttctggctg tccctgaagc cataggtttt 720
gatataatta cgatggacta caaaggaagt tatctgcga tctgcttgct tcatcccggt 780
cagaagacag ctttcatgca gttttacaag acagcaaaag attggtggct gttcagtttc 840
tatttctgct tgccattggc catcactgca ttttttata cactaatgac ctgtgaaatg 900
ttgagaaaga aaagtggcat gcagattgct ttaaattgat acctaaagca gagacgggaa 960
gtgaagaaaa ccgtcttttg cctggctcct gtctttgccc tctgctggct tccccttcac 1020
ctcagcagga ttctgaagct cactctttat aatcagaatg atcccaatag atgtgaactt 1080
ttgagctttc tgttgggtatt ggactatatt ggtatcaaca tggcttcaact gaattcctgc 1140
attaacccaa ttgctctgta tttgggtgagc aaaagattca aaaactgctt taagtcatgc 1200
ttatgctgct ggtgccagtc atttgaagaa aaacagtcct tggaggaaaa gcagtcgtgc 1260
ttaaagttca aagctaataga tcacggatat gacaacttcc gttccagtaa taaatacagc 1320
tcattctga 1329

<210> 497
<211> 442
<212> PRT
<213> Homo sapiens

<400> 497
Met Gln Pro Pro Pro Ser Leu Cys Gly Arg Ala Leu Val Ala Leu Val
1 5 10 15
Leu Ala Cys Gly Leu Ser Arg Ile Trp Gly Glu Glu Arg Gly Phe Pro
20 25 30
Pro Asp Arg Ala Thr Pro Leu Leu Gln Thr Ala Glu Ile Met Thr Pro
35 40 45
Pro Thr Lys Thr Leu Trp Pro Lys Gly Ser Asn Ala Ser Leu Ala Arg

355 360 365
Tyr Ile Gly Ile Asn Met Ala Ser Leu Asn Ser Cys Ile Asn Pro Ile
370 375 380
Ala Leu Tyr Leu Val Ser Lys Arg Phe Lys Asn Cys Phe Lys Ser Cys
385 390 395 400
Leu Cys Cys Trp Cys Gln Ser Phe Glu Glu Lys Gln Ser Leu Glu Glu
405 410 415
Lys Gln Ser Cys Leu Lys Phe Lys Ala Asn Asp His Gly Tyr Asp Asn
420 425 430
Phe Arg Ser Ser Asn Lys Tyr Ser Ser Ser
435 440

<210> 498
<211> 1053
<212> DNA
<213> Homo sapiens

<400> 498
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gtcctgggca acgggcttgt gatctgggtg gctggattcc ggatgacaca cacagtcacc 180
accatcagtt acctgaacct ggccgtggct gacttctgtt tcacctccac tttgccattc 240
ttcatgggtca ggaaggccat gggaggacat tggcctttcg gctggttcct gtgcaaattc 300
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ctggaccgct gtgtttgct cctgcatcca gtctggacc agaaccaccg caccgtgagc 420
ctggccaaga aggtgatcat tgggccctgg gtgatggctc tgctcctcac attgccagtt 480
atcattcgtg tgactacagt acctggtaaa acggggacag tagcctgcac ttttaacttt 540
tcgccctgga ccaacgaccc taaagagagg ataaatgtgg ccgttgccat gttgacggtg 600
agaggcatca tccggttcat cattggcttc agcgcaccca tgtccatcgt tgctgtcagt 660
tatgggctta ttgccaccaa gatccacaag caaggcttga ttaagtccag tcgtcccaa 720
cgggtcctct cctttgtcgc agcagccttt tttctctgct ggtccccata tcagggtggtg 780
gcccttatag ccacagtcag aatccgtgag ttattgcaag gcatgtacaa agaaattggt 840
attgcagtgg atgtgacaag tgccctggcc ttcttcaaca gctgcctcaa cccatgctc 900
tatgtcttca tgggccaagga ctccggggag aggctgatcc acgcccttcc cggcagttctg 960
gagaggggccc tgaccgagga ctcaacccaa accagtgaca cagctaccaa ttctacttta 1020
ccttctgcag aggtggagtt acaggcaaaag tga 1053

<210> 499
<211> 350
<212> PRT
<213> Homo sapiens

<400> 499
Met Glu Thr Asn Ser Ser Leu Pro Thr Asn Ile Ser Gly Gly Thr Pro
1 5 10 15
Ala Val Ser Ala Gly Tyr Leu Phe Leu Asp Ile Ile Thr Tyr Leu Val
20 25 30
Phe Ala Val Thr Phe Val Leu Gly Val Leu Gly Asn Gly Leu Val Ile

35	40	45
Trp Val Ala Gly Phe Arg Met Thr His Thr Val Thr Thr Ile Ser Tyr		
50	55	60
Leu Asn Leu Ala Val Ala Asp Phe Cys Phe Thr Ser Thr Leu Pro Phe		
65	70	75
Phe Met Val Arg Lys Ala Met Gly Gly His Trp Pro Phe Gly Trp Phe		
85	90	95
Leu Cys Lys Phe Val Phe Thr Ile Val Asp Ile Asn Leu Phe Gly Ser		
100	105	110
Val Phe Leu Ile Ala Leu Ile Ala Leu Asp Arg Cys Val Cys Val Leu		
115	120	125
His Pro Val Trp Thr Gln Asn His Arg Thr Val Ser Leu Ala Lys Lys		
130	135	140
Val Ile Ile Gly Pro Trp Val Met Ala Leu Leu Leu Thr Leu Pro Val		
145	150	155
Ile Ile Arg Val Thr Thr Val Pro Gly Lys Thr Gly Thr Val Ala Cys		
165	170	175
Thr Phe Asn Phe Ser Pro Trp Thr Asn Asp Pro Lys Glu Arg Ile Asn		
180	185	190
Val Ala Val Ala Met Leu Thr Val Arg Gly Ile Ile Arg Phe Ile Ile		
195	200	205
Gly Phe Ser Ala Pro Met Ser Ile Val Ala Val Ser Tyr Gly Leu Ile		
210	215	220
Ala Thr Lys Ile His Lys Gln Gly Leu Ile Lys Ser Ser Arg Pro Lys		
225	230	235
Arg Val Leu Ser Phe Val Ala Ala Ala Phe Phe Leu Cys Trp Ser Pro		
245	250	255
Tyr Gln Val Val Ala Leu Ile Ala Thr Val Arg Ile Arg Glu Leu Leu		
260	265	270
Gln Gly Met Tyr Lys Glu Ile Gly Ile Ala Val Asp Val Thr Ser Ala		
275	280	285
Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe Met		
290	295	300
Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ala Leu Pro Ala Ser Leu		
305	310	315
Glu Arg Ala Leu Thr Glu Asp Ser Thr Gln Thr Ser Asp Thr Ala Thr		
325	330	335
Asn Ser Thr Leu Pro Ser Ala Glu Val Glu Leu Gln Ala Lys		

340

345

350

<210> 500
 <211> 1056
 <212> DNA
 <213> Homo sapiens

<400> 500
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 gcactcctgg gtggcaccac tgaggagagg ctgaagggtg ccattaccat gctgacagcc 600
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 <211> 351
 <212> PRT
 <213> Homo sapiens

<400> 501
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 20 25 30
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 35 40 45
 Trp Val Ala Gly Phe Arg Met Thr Arg Thr Val Thr Thr Ile Cys Tyr
 50 55 60
 Leu Asn Leu Ala Leu Ala Asp Phe Ser Phe Thr Ala Thr Leu Pro Phe
 65 70 75 80
 Leu Ile Val Ser Met Ala Met Gly Glu Lys Trp Pro Phe Gly Trp Phe
 85 90 95
 Leu Cys Lys Leu Ile His Ile Val Val Asp Ile Asn Leu Phe Gly Ser
 100 105 110
 Val Phe Leu Ile Gly Phe Ile Ala Leu Asp Arg Cys Ile Cys Val Leu

115	120	125
His Pro Val Trp Ala Gln Asn	His Arg Thr Val Ser Leu Ala Met Lys	
130	135	140
Val Ile Val Gly Pro Trp Ile Leu Ala Leu Val Leu Thr Leu Pro Val		
145	150	155
Phe Leu Phe Leu Thr Thr Val Thr Ile Pro Asn Gly Asp Thr Tyr Cys		
	165	170
Thr Phe Asn Phe Ala Ser Trp Gly Gly Thr Pro Glu Glu Arg Leu Lys		
	180	185
Val Ala Ile Thr Met Leu Thr Ala Arg Gly Ile Ile Arg Phe Val Ile		
	195	200
Gly Phe Ser Leu Pro Met Ser Ile Val Ala Ile Cys Tyr Gly Leu Ile		
	210	215
Ala Ala Lys Ile His Lys Lys Gly Met Ile Lys Ser Ser Arg Pro Lys		
	225	230
Arg Val Leu Thr Ala Val Val Ala Ser Phe Phe Ile Cys Trp Phe Pro		
	245	250
Phe Gln Leu Val Ala Leu Leu Gly Thr Val Trp Leu Lys Glu Met Leu		
	260	265
Phe Tyr Gly Lys Tyr Lys Ile Ile Asp Ile Leu Val Asn Pro Thr Ser		
	275	280
Ser Leu Ala Phe Phe Asn Ser Cys Leu Asn Pro Met Leu Tyr Val Phe		
	290	295
Val Gly Gln Asp Phe Arg Glu Arg Leu Ile His Ser Leu Pro Thr Ser		
	305	310
Leu Glu Arg Ala Leu Ser Glu Asp Ser Ala Pro Thr Asn Asp Thr Ala		
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Ala Asn Ser Ala Ser Pro Pro Ala Glu Thr Glu Leu Gln Ala Met		
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<210> 502

<211> 1050

<212> DNA

<213> Homo sapiens

<400> 502

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gacctggcct acctgctctt ctgcatcccc ttccaggcca ccgtgtacgc gctgcccacc 300
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<210> 503
 <211> 349
 <212> PRT
 <213> Homo sapiens

<400> 503

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Glu	Pro	Pro	Ala	Pro	Glu	Pro	Gly	Pro	Leu	Phe	Gly	Ile	Gly	Val	Glu
			20					25					30		
Asn	Phe	Val	Thr	Leu	Val	Val	Phe	Gly	Leu	Ile	Phe	Ala	Leu	Gly	Val
		35					40					45			
Leu	Gly	Asn	Ser	Leu	Val	Ile	Thr	Val	Leu	Ala	Arg	Ser	Lys	Pro	Gly
	50					55					60				
Lys	Pro	Arg	Ser	Thr	Thr	Asn	Leu	Phe	Ile	Leu	Asn	Leu	Ser	Ile	Ala
	65				70				75						80
Asp	Leu	Ala	Tyr	Leu	Leu	Phe	Cys	Ile	Pro	Phe	Gln	Ala	Thr	Val	Tyr
			85					90						95	
Ala	Leu	Pro	Thr	Trp	Val	Leu	Gly	Ala	Phe	Ile	Cys	Lys	Phe	Ile	His
			100				105						110		
Tyr	Phe	Phe	Thr	Val	Ser	Met	Leu	Val	Ser	Ile	Phe	Thr	Leu	Ala	Ala
	115					120					125				
Met	Ser	Val	Asp	Arg	Tyr	Val	Ala	Ile	Val	His	Ser	Arg	Arg	Ser	Ser
	130				135						140				
Ser	Leu	Arg	Val	Ser	Arg	Asn	Ala	Leu	Leu	Gly	Val	Gly	Cys	Ile	Trp
145				150						155					160
Ala	Leu	Ser	Ile	Ala	Met	Ala	Ser	Pro	Val	Ala	Tyr	His	Gln	Gly	Leu
			165					170						175	
Phe	His	Pro	Arg	Ala	Ser	Asn	Gln	Thr	Phe	Cys	Trp	Glu	Gln	Trp	Pro
		180					185						190		
Asp	Pro	Arg	His	Lys	Lys	Ala	Tyr	Val	Val	Cys	Thr	Phe	Val	Phe	Gly

195	200	205
Tyr Leu Leu Pro Leu Leu Leu Ile Cys Phe Cys Tyr Ala Lys Val Leu		
210	215	220
Asn His Leu His Lys Lys Leu Lys Asn Met Ser Lys Lys Ser Glu Ala		
225	230	235
Ser Lys Lys Lys Thr Lys Gln Thr Val Leu Val Val Val Val Val Phe		
	245	250
Gly Ile Ser Trp Leu Pro His His Ile Ile His Leu Trp Ala Glu Phe		
	260	265
Gly Val Phe Pro Leu Thr Pro Ala Ser Phe Leu Phe Arg Ile Thr Ala		
	275	280
His Cys Leu Ala Tyr Ser Asn Ser Ser Val Asn Pro Ile Ile Tyr Ala		
	290	295
Phe Leu Ser Glu Asn Phe Arg Lys Ala Tyr Lys Lys Gln Val Phe Lys Cys		
	305	310
His Ile Arg Lys Asp Ser His Leu Ser Asp Thr Lys Glu Asn Lys Ser		
	325	330
Arg Ile Asp Thr Pro Pro Ser Thr Asn Cys Thr His Val		
	340	345

<210> 504
 <211> 1164
 <212> DNA
 <213> Homo sapiens

<400> 504

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<210> 505
 <211> 387
 <212> PRT
 <213> Homo sapiens

<400> 505

Met	Asn	Val	Ser	Gly	Cys	Pro	Gly	Ala	Gly	Asn	Ala	Ser	Gln	Ala	Gly
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Gly	Gly	Gly	Gly	Trp	His	Pro	Glu	Ala	Val	Ile	Val	Pro	Leu	Leu	Phe
			20					25					30		
Ala	Leu	Ile	Phe	Leu	Val	Gly	Thr	Val	Gly	Asn	Thr	Leu	Val	Leu	Ala
		35					40					45			
Val	Leu	Leu	Arg	Gly	Gly	Gln	Ala	Val	Ser	Thr	Thr	Asn	Leu	Phe	Ile
	50					55					60				
Leu	Asn	Leu	Gly	Val	Ala	Asp	Leu	Cys	Phe	Ile	Leu	Cys	Cys	Val	Pro
65					70					75					80
Phe	Gln	Ala	Thr	Ile	Tyr	Thr	Leu	Asp	Gly	Trp	Val	Phe	Gly	Ser	Leu
				85					90					95	
Leu	Cys	Lys	Ala	Val	His	Phe	Leu	Ile	Phe	Leu	Thr	Met	His	Ala	Ser
			100					105					110		
Ser	Phe	Thr	Leu	Ala	Ala	Val	Ser	Leu	Asp	Arg	Tyr	Leu	Ala	Ile	Arg
		115					120					125			
Tyr	Pro	Leu	His	Ser	Arg	Glu	Leu	Arg	Thr	Pro	Arg	Asn	Ala	Leu	Ala
	130					135						140			
Ala	Ile	Gly	Leu	Ile	Trp	Gly	Leu	Ser	Leu	Leu	Phe	Ser	Gly	Pro	Tyr
145					150					155					160
Leu	Ser	Tyr	Tyr	Arg	Gln	Ser	Gln	Leu	Ala	Asn	Leu	Thr	Val	Cys	His
				165					170					175	
Pro	Ala	Trp	Ser	Ala	Pro	Arg	Arg	Arg	Ala	Met	Asp	Ile	Cys	Thr	Phe
			180					185					190		
Val	Phe	Ser	Tyr	Leu	Leu	Pro	Val	Leu	Val	Leu	Gly	Leu	Thr	Tyr	Ala
		195					200					205			
Arg	Thr	Leu	Arg	Tyr	Leu	Trp	Arg	Ala	Val	Asp	Pro	Val	Ala	Ala	Gly
	210					215					220				
Ser	Gly	Ala	Arg	Arg	Ala	Lys	Arg	Lys	Val	Lys	Arg	Met	Ile	Leu	Ile
225					230					235					240
Val	Ala	Ala	Leu	Phe	Cys	Leu	Cys	Trp	Met	Pro	His	His	Ala	Leu	Ile
			245						250					255	
Leu	Cys	Val	Trp	Phe	Gly	Gln	Phe	Pro	Leu	Thr	Arg	Ala	Thr	Tyr	Ala
		260						265					270		

Leu Arg Ile Leu Ser His Leu Val Ser Tyr Ala Asn Ser Cys Val Asn
275 280 285

Pro Ile Val Tyr Ala Leu Val Ser Lys His Phe Arg Lys Gly Phe Arg
290 295 300

Thr Ile Cys Ala Gly Leu Leu Gly Arg Ala Pro Gly Arg Ala Ser Gly
305 310 315 320

Arg Val Cys Ala Ala Ala Arg Gly Thr His Ser Gly Ser Val Leu Glu
325 330 335

Arg Glu Ser Ser Asp Leu Leu His Met Ser Glu Ala Ala Gly Ala Leu
340 345 350

Arg Pro Cys Pro Gly Ala Ser Gln Pro Cys Ile Leu Glu Pro Cys Pro
355 360 365

Gly Pro Ser Trp Gln Gly Pro Lys Ala Gly Asp Ser Ile Leu Thr Val
370 375 380

Asp Val Ala
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<210> 506
<211> 1401
<212> DNA
<213> Homo sapiens

<400> 506
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<210> 507
 <211> 466
 <212> PRT
 <213> Homo sapiens

<400> 507

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Gly	Leu	Leu	Leu	Gln	Arg	Ala	Glu	Thr	Gly	Ser	Lys	Gly	Gln	Thr	Ala
			20					25					30		
Gly	Glu	Leu	Tyr	Gln	Arg	Trp	Glu	Arg	Tyr	Arg	Arg	Glu	Cys	Gln	Glu
		35					40					45			
Thr	Leu	Ala	Ala	Ala	Glu	Pro	Pro	Ser	Gly	Leu	Ala	Cys	Asn	Gly	Ser
	50					55					60				
Phe	Asp	Met	Tyr	Val	Cys	Trp	Asp	Tyr	Ala	Ala	Pro	Asn	Ala	Thr	Ala
65					70					75					80
Arg	Ala	Ser	Cys	Pro	Trp	Tyr	Leu	Pro	Trp	His	His	His	Val	Ala	Ala
				85					90					95	
Gly	Phe	Val	Leu	Arg	Gln	Cys	Gly	Ser	Asp	Gly	Gln	Trp	Gly	Leu	Trp
			100					105					110		
Arg	Asp	His	Thr	Gln	Cys	Glu	Asn	Pro	Glu	Lys	Asn	Glu	Ala	Phe	Leu
		115					120					125			
Asp	Gln	Arg	Leu	Ile	Leu	Glu	Arg	Leu	Gln	Val	Met	Tyr	Thr	Val	Gly
	130					135					140				
Tyr	Ser	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Leu	Ala	Leu	Leu	Ile	Leu	Ser
145					150					155					160
Leu	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	His	Ile	Asn	Leu
				165					170					175	
Phe	Thr	Ser	Phe	Met	Leu	Arg	Ala	Ala	Ala	Ile	Leu	Ser	Arg	Asp	Arg
			180				185						190		
Leu	Leu	Pro	Arg	Pro	Gly	Pro	Tyr	Leu	Gly	Asp	Gln	Ala	Leu	Ala	Leu
		195					200					205			
Trp	Asn	Gln	Ala	Leu	Ala	Ala	Cys	Arg	Thr	Ala	Gln	Ile	Val	Thr	Gln
	210					215					220				
Tyr	Cys	Val	Gly	Ala	Asn	Tyr	Thr	Trp	Leu	Leu	Val	Glu	Gly	Val	Tyr
225					230					235					240
Leu	His	Ser	Leu	Leu	Val	Leu	Val	Gly	Gly	Ser	Glu	Glu	Gly	His	Phe
			245						250					255	
Arg	Tyr	Tyr	Leu	Leu	Leu	Gly	Trp	Gly	Ala	Pro	Ala	Leu	Phe	Val	Ile
			260					265					270		

Pro Trp Val Ile Val Arg Tyr Leu Tyr Glu Asn Thr Gln Cys Trp Glu
275 280 285

Arg Asn Glu Val Lys Ala Ile Trp Trp Ile Ile Arg Thr Pro Ile Leu
290 295 300

Met Thr Ile Leu Ile Asn Phe Leu Ile Phe Ile Arg Ile Leu Gly Ile
305 310 315 320

Leu Leu Ser Lys Leu Arg Thr Arg Gln Met Arg Cys Arg Asp Tyr Arg
325 330 335

Leu Arg Leu Ala Arg Ser Pro Leu Thr Leu Val Pro Leu Leu Gly Val
340 345 350

His Glu Val Val Phe Ala Pro Val Thr Glu Glu Gln Ala Arg Gly Ala
355 360 365

Leu Arg Phe Ala Lys Leu Gly Phe Glu Ile Phe Leu Ser Ser Phe Gln
370 375 380

Gly Phe Leu Val Ser Val Leu Tyr Cys Phe Ile Asn Lys Glu Val Gln
385 390 395 400

Ser Glu Ile Arg Arg Gly Trp His His Cys Arg Leu Arg Arg Ser Leu
405 410 415

Gly Glu Glu Gln Arg Gln Leu Pro Glu Arg Ala Phe Arg Ala Leu Pro
420 425 430

Ser Gly Ser Gly Pro Gly Glu Val Pro Thr Ser Arg Gly Leu Ser Ser
435 440 445

Gly Thr Leu Pro Gly Pro Gly Asn Glu Ala Ser Arg Glu Leu Glu Ser
450 455 460

Tyr Cys
465

<210> 508
<211> 1002
<212> DNA
<213> Homo sapiens

<400> 508
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<210> 509

<211> 333

<212> PRT

<213> Homo sapiens

<400> 509

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      20              25              30

Ala Thr Thr Val Leu Tyr Cys Leu Val Phe Leu Leu Ser Leu Val Gly
      35              40              45

Asn Ser Leu Val Leu Trp Val Leu Val Lys Tyr Glu Ser Leu Glu Ser
      50              55              60

Leu Thr Asn Ile Phe Ile Leu Asn Leu Cys Leu Ser Asp Leu Val Phe
      65              70              75              80

Ala Cys Leu Leu Pro Val Trp Ile Ser Pro Tyr His Trp Gly Trp Val
      85              90              95

Leu Gly Asp Phe Leu Cys Lys Leu Leu Asn Met Ile Phe Ser Ile Ser
      100              105              110

Leu Tyr Ser Ser Ile Phe Phe Leu Thr Ile Met Thr Ile His Arg Tyr
      115              120              125

Leu Ser Val Val Ser Pro Leu Ser Thr Leu Arg Val Pro Thr Leu Arg
      130              135              140

Cys Arg Val Leu Val Thr Met Ala Val Trp Val Ala Ser Ile Leu Ser
      145              150              155              160

Ser Ile Leu Asp Thr Ile Phe His Lys Val Leu Ser Ser Gly Cys Asp
      165              170              175

Tyr Ser Glu Leu Thr Trp Tyr Leu Thr Ser Val Tyr Gln His Asn Leu
      180              185              190

Phe Phe Leu Leu Ser Leu Gly Ile Ile Leu Phe Cys Tyr Val Glu Ile
      195              200              205

Leu Arg Thr Leu Phe Arg Ser Arg Ser Lys Arg Arg His Arg Thr Lys
      210              215              220

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Lys Leu Ile Phe Ala Ile Val Val Ala Tyr Phe Leu Ser Trp Gly Pro
 225 230 235 240
 Tyr Asn Phe Thr Leu Phe Leu Gln Thr Leu Phe Arg Thr Gln Ile Ile
 245 250 255
 Arg Ser Cys Glu Ala Lys Gln Gln Leu Glu Tyr Ala Leu Leu Ile Cys
 260 265 270
 Arg Asn Leu Ala Phe Ser His Cys Cys Phe Asn Pro Val Leu Tyr Val
 275 280 285
 Phe Val Gly Val Lys Phe Arg Thr His Leu Lys His Val Leu Arg Gln
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 Phe Trp Phe Cys Arg Leu Gln Ala Pro Ser Pro Ala Ser Ile Pro His
 305 310 315 320
 Ser Pro Gly Ala Phe Ala Tyr Glu Gly Ala Ser Phe Tyr
 325 330

<210> 510
 <211> 1155
 <212> DNA
 <213> Homo sapiens

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 tatgtcatcc ctgcagttta tggggttatc attctgatat gcctcattgg caacatcact 180
 ttgatcaaga tcttctgtac agtcaagtcc atgcgaaacg ttccaaacct gttcatttcc 240
 agtctggctt tgggagacct gctcctccta ataacgtgtg ctccagtggg tgccagcagg 300
 tacctggctg acagatggct atttggcagg attggctgca aactgatccc ctttatacag 360
 cttacctctg ttgggggtgc tgtcttcaca ctacacggcg tctcggcaga cagatacaaa 420
 gccattgtcc ggccaatgga tatccaggcc tcccatgccc tgatgaagat ctgcctcaaa 480
 gccgccttta tctggatcat ctccatgctg ctggccattc cagaggccgt gttttctgac 540
 ctccatccct tccatgagga aagcaccaac cagaccttca ttagctgtgc ccataacca 600
 cactctaata agcttcaccc caaaatccat tctatggctt cctttctggt cttctacgtc 660
 atcccactgt cgatcatctc tgtttactac tacttcattg ctaaaaatct gatccagagt 720
 gttacaatc ttcccgtgga aggaatata catgtcaaga agcagattga atcccgaag 780
 cgacttaaga agacagtgt ggtgtttgtg ggectgttcg ccttctgctg gctccccaat 840
 catgtcatct acctgtaccg ctctaccac tactctgagg tggacacctc catgctccac 900
 tttgtcacca gcatctgtgc ccgcctcctg gccttcacca actcctgcgt gaaccctttt 960
 gccctctacc tgcgtgagcaa gagtttcagg aaacagttca aactcagct gctctgttgc 1020
 cagcctggcc tgatcatccg gtctcacagc actggaagga gtacaacctg catgacctcc 1080
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 gagcggatat tctag 1155

<210> 511
 <211> 384
 <212> PRT
 <213> Homo sapiens

<400> 511
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			20							25				30		
Asp	Trp	Ser	His	Pro	Gly	Ile	Leu	Tyr	Val	Ile	Pro	Ala	Val	Tyr	Gly	
		35							40				45			
Val	Ile	Ile	Leu	Ile	Gly	Leu	Ile	Gly	Asn	Ile	Thr	Leu	Ile	Lys	Ile	
		50							55				60			
Phe	Cys	Thr	Val	Lys	Ser	Met	Arg	Asn	Val	Pro	Asn	Leu	Phe	Ile	Ser	
		65							70				75			
Ser	Leu	Ala	Leu	Gly	Asp	Leu	Leu	Leu	Leu	Ile	Thr	Cys	Ala	Pro	Val	
					85							90			95	
Asp	Ala	Ser	Arg	Tyr	Leu	Ala	Asp	Arg	Trp	Leu	Phe	Gly	Arg	Ile	Gly	
					100						105				110	
Cys	Lys	Leu	Ile	Pro	Phe	Ile	Gln	Leu	Thr	Ser	Val	Gly	Val	Ser	Val	
				115						120				125		
Phe	Thr	Leu	Thr	Ala	Leu	Ser	Ala	Asp	Arg	Tyr	Lys	Ala	Ile	Val	Arg	
				130						135				140		
Pro	Met	Asp	Ile	Gln	Ala	Ser	His	Ala	Leu	Met	Lys	Ile	Cys	Leu	Lys	
				145						150				155		
Ala	Ala	Phe	Ile	Trp	Ile	Ile	Ser	Met	Leu	Leu	Ala	Ile	Pro	Glu	Ala	
							165						170			
Val	Phe	Ser	Asp	Leu	His	Pro	Phe	His	Glu	Glu	Ser	Thr	Asn	Gln	Thr	
							180						185			
Phe	Ile	Ser	Cys	Ala	Pro	Tyr	Pro	His	Ser	Asn	Glu	Leu	His	Pro	Lys	
						195						200				
Ile	His	Ser	Met	Ala	Ser	Phe	Leu	Val	Phe	Tyr	Val	Ile	Pro	Leu	Ser	
								215						220		
Ile	Ile	Ser	Val	Tyr	Tyr	Tyr	Phe	Ile	Ala	Lys	Asn	Leu	Ile	Gln	Ser	
								225						230		
Ala	Tyr	Asn	Leu	Pro	Val	Glu	Gly	Asn	Ile	His	Val	Lys	Lys	Gln	Ile	
									245						250	
Glu	Ser	Arg	Lys	Arg	Leu	Lys	Lys	Thr	Val	Leu	Val	Phe	Val	Gly	Leu	
										260						
Phe	Ala	Phe	Cys	Trp	Leu	Pro	Asn	His	Val	Ile	Tyr	Leu	Tyr	Arg	Ser	
										275						
Tyr	His	Tyr	Ser	Glu	Val	Asp	Thr	Ser	Met	Leu	His	Phe	Val	Thr	Ser	
										290						
Ile	Cys	Ala	Arg	Leu	Leu	Ala	Phe	Thr	Asn	Ser	Cys	Val	Asn	Pro	Phe	
										295						

1	5	10	15
Ala Pro Gly Lys Gly Pro Trp Gln Val Ala Phe Ile Gly Ile Thr Thr	20	25	30
Gly Leu Leu Ser Leu Ala Thr Val Thr Gly Asn Leu Leu Val Leu Ile	35	40	45
Ser Phe Lys Val Asn Thr Glu Leu Lys Thr Val Asn Asn Tyr Phe Leu	50	55	60
Leu Ser Leu Ala Cys Ala Asp Leu Ile Ile Gly Thr Phe Ser Met Asn	65	70	75
Leu Tyr Thr Thr Tyr Leu Leu Met Gly His Trp Ala Leu Gly Thr Leu	85	90	95
Ala Cys Asp Leu Trp Leu Ala Leu Asp Tyr Val Ala Ser Asn Ala Ser	100	105	110
Val Met Asn Leu Leu Leu Ile Ser Phe Asp Arg Tyr Phe Ser Val Thr	115	120	125
Arg Pro Leu Ser Tyr Arg Ala Lys Arg Thr Pro Arg Arg Ala Ala Leu	130	135	140
Met Ile Gly Leu Ala Trp Leu Val Ser Phe Val Leu Trp Ala Pro Ala	145	150	155
Ile Leu Phe Trp Gln Tyr Leu Val Gly Glu Arg Thr Met Leu Ala Gly	165	170	175
Gln Cys Tyr Ile Gln Phe Leu Ser Gln Pro Ile Ile Thr Phe Gly Thr	180	185	190
Ala Met Ala Ala Phe Tyr Leu Pro Val Thr Val Met Cys Thr Leu Tyr	195	200	205
Trp Arg Ile Tyr Arg Glu Thr Glu Asn Arg Ala Arg Glu Leu Ala Ala	210	215	220
Leu Gln Gly Ser Glu Thr Pro Gly Lys Gly Gly Gly Ser Ser Ser Ser	225	230	235
Ser Glu Arg Ser Gln Pro Gly Ala Glu Gly Ser Pro Glu Thr Pro Pro	245	250	255
Gly Arg Cys Cys Arg Cys Cys Arg Ala Pro Arg Leu Leu Gln Ala Tyr	260	265	270
Ser Trp Lys Glu Glu Glu Glu Glu Asp Glu Gly Ser Met Glu Ser Leu	275	280	285
Thr Ser Ser Glu Gly Glu Glu Pro Gly Ser Glu Val Val Ile Lys Met	290	295	300
Pro Met Val Asp Pro Glu Ala Gln Ala Pro Thr Lys Gln Pro Pro Arg			

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<210> 515
<211> 466
<212> PRT
<213> Homo sapiens

<400> 515
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Leu Ser Leu Val Thr Ile Ile Gly Asn Ile Leu Val Met Val Ser Ile
35 40 45
Lys Val Asn Arg His Leu Gln Thr Val Asn Asn Tyr Phe Leu Phe Ser
50 55 60
Leu Ala Cys Ala Asp Leu Ile Ile Gly Val Phe Ser Met Asn Leu Tyr
65 70 75 80
Thr Leu Tyr Thr Val Ile Gly Tyr Trp Pro Leu Gly Pro Val Val Cys
85 90 95
Asp Leu Trp Leu Ala Leu Asp Tyr Val Val Ser Asn Ala Ser Val Met
100 105 110
Asn Leu Leu Ile Ile Ser Phe Asp Arg Tyr Phe Cys Val Thr Lys Pro
115 120 125
Leu Thr Tyr Pro Val Lys Arg Thr Thr Lys Met Ala Gly Met Met Ile
130 135 140
Ala Ala Ala Trp Val Leu Ser Phe Ile Leu Trp Ala Pro Ala Ile Leu
145 150 155 160
Phe Trp Gln Phe Ile Val Gly Val Arg Thr Val Glu Asp Gly Glu Cys
165 170 175
Tyr Ile Gln Phe Phe Ser Asn Ala Ala Val Thr Phe Gly Thr Ala Ile
180 185 190
Ala Ala Phe Tyr Leu Pro Val Ile Ile Met Thr Val Leu Tyr Trp His
195 200 205
Ile Ser Arg Ala Ser Lys Ser Arg Ile Lys Lys Asp Lys Lys Glu Pro
210 215 220
Val Ala Asn Gln Asp Pro Val Ser Pro Ser Leu Val Gln Gly Arg Ile
225 230 235 240
Val Lys Pro Asn Asn Asn Asn Met Pro Ser Ser Asp Asp Gly Leu Glu

245								250				255			
His	Asn	Lys	Ile	Gln	Asn	Gly	Lys	Ala	Pro	Arg	Asp	Pro	Val	Thr	Glu
			260				265						270		
Asn	Cys	Val	Gln	Gly	Glu	Glu	Lys	Glu	Ser	Ser	Asn	Asp	Ser	Thr	Ser
			275				280						285		
Val	Ser	Ala	Val	Ala	Ser	Asn	Met	Arg	Asp	Asp	Glu	Ile	Thr	Gln	Asp
			290				295						300		
Glu	Asn	Thr	Val	Ser	Thr	Ser	Leu	Gly	His	Ser	Lys	Asp	Glu	Asn	Ser
305				310						315			320		
Lys	Gln	Thr	Cys	Ile	Arg	Ile	Gly	Thr	Lys	Thr	Pro	Lys	Ser	Asp	Ser
			325				330						335		
Cys	Thr	Pro	Thr	Asn	Thr	Thr	Val	Glu	Val	Val	Gly	Ser	Ser	Gly	Gln
			340				345						350		
Asn	Gly	Asp	Glu	Lys	Gln	Asn	Ile	Val	Ala	Arg	Lys	Ile	Val	Lys	Met
			355				360						365		
Thr	Lys	Gln	Pro	Ala	Lys	Lys	Lys	Pro	Pro	Pro	Ser	Arg	Glu	Lys	Lys
			370				375						380		
Val	Lys	Arg	Thr	Ile	Leu	Ala	Ile	Leu	Leu	Ala	Phe	Ile	Ile	Thr	Trp
385				390						395			400		
Ala	Pro	Tyr	Asn	Val	Met	Val	Leu	Ile	Asn	Thr	Phe	Cys	Ala	Pro	Cys
			405				410						415		
Ile	Pro	Asn	Thr	Val	Trp	Thr	Ile	Gly	Tyr	Trp	Leu	Cys	Tyr	Ile	Asn
			420				425						430		
Ser	Thr	Ile	Asn	Pro	Ala	Cys	Tyr	Ala	Leu	Cys	Asn	Ala	Thr	Phe	Lys
			435				440						445		
Lys	Thr	Phe	Lys	His	Leu	Leu	Met	Cys	His	Tyr	Lys	Asn	Ile	Gly	Ala
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<210> 516
<211> 1773
<212> DNA
<213> Homo sapiens
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aatgtttctc	gagcagctgg	caattttctc	tctccagacg	gtaccacoga	tgacctctcg	180	
ggaggtcata	ccgtctggca	agtgggtctt	atcgctttct	taacggggcat	cctggccttg	240	
gtgaccatca	tcggaacat	cctggtaatt	gtgtcattta	aggtcaacaa	gcagctgaag	300	
acggtcaaca	actacttct	cttaagcctg	gcctgtgccg	atctgattat	cggggtcatt	360	

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gtcatcagct ttgacagata cttttccatc acgaggccgc tcacgtaccg agccaaacga 540
acaacaaaga gagccggtgt gatgatcggg ctgggttggg tcatctcctt tgtcctttgg 600
gctcctgcca tcttgttctg gcaatacttt gttggaaaga gaactgtgcc tccgggagag 660
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<210> 517
 <211> 590
 <212> PRT
 <213> Homo sapiens

<400> 517

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Ser	Ser	Ser	Trp	Ile	His	Ser	Pro	Ser	Asp	Ala	Gly	Leu	Pro	Pro	Gly
			20					25					30		
Thr	Val	Thr	His	Phe	Gly	Ser	Tyr	Asn	Val	Ser	Arg	Ala	Ala	Gly	Asn
			35					40					45		
Phe	Ser	Ser	Pro	Asp	Gly	Thr	Thr	Asp	Asp	Pro	Leu	Gly	Gly	His	Thr
			50					55			60				
Val	Trp	Gln	Val	Val	Phe	Ile	Ala	Phe	Leu	Thr	Gly	Ile	Leu	Ala	Leu
			65			70				75				80	
Val	Thr	Ile	Ile	Gly	Asn	Ile	Leu	Val	Ile	Val	Ser	Phe	Lys	Val	Asn
				85				90						95	
Lys	Gln	Leu	Lys	Thr	Val	Asn	Asn	Tyr	Phe	Leu	Leu	Ser	Leu	Ala	Cys
			100					105					110		
Ala	Asp	Leu	Ile	Ile	Gly	Val	Ile	Ser	Met	Asn	Leu	Phe	Thr	Thr	Tyr
			115				120					125			
Ile	Ile	Met	Asn	Arg	Trp	Ala	Leu	Gly	Asn	Leu	Ala	Cys	Asp	Leu	Trp

130	135	140																	
Leu	Ala	Ile	Asp	Tyr	Val	Ala	Ser	Asn	Ala	Ser	Val	Met	Asn	Leu	Leu				
145					150					155				160					
Val	Ile	Ser	Phe	Asp	Arg	Tyr	Phe	Ser	Ile	Thr	Arg	Pro	Leu	Thr	Tyr				
				165					170					175					
Arg	Ala	Lys	Arg	Thr	Thr	Lys	Arg	Ala	Gly	Val	Met	Ile	Gly	Leu	Ala				
			180					185					190						
Trp	Val	Ile	Ser	Phe	Val	Leu	Trp	Ala	Pro	Ala	Ile	Leu	Phe	Trp	Gln				
	195						200					205							
Tyr	Phe	Val	Gly	Lys	Arg	Thr	Val	Pro	Pro	Gly	Glu	Cys	Phe	Ile	Gln				
	210					215					220								
Phe	Leu	Ser	Glu	Pro	Thr	Ile	Thr	Phe	Gly	Thr	Ala	Ile	Ala	Ala	Phe				
225					230					235					240				
Tyr	Met	Pro	Val	Thr	Ile	Met	Thr	Ile	Leu	Tyr	Trp	Arg	Ile	Tyr	Lys				
				245					250					255					
Glu	Thr	Glu	Lys	Arg	Thr	Lys	Glu	Leu	Ala	Gly	Leu	Gln	Ala	Ser	Gly				
			260					265					270						
Thr	Glu	Ala	Glu	Thr	Glu	Asn	Phe	Val	His	Pro	Thr	Gly	Ser	Ser	Arg				
	275						280					285							
Ser	Cys	Ser	Ser	Tyr	Glu	Leu	Gln	Gln	Gln	Ser	Met	Lys	Arg	Ser	Asn				
	290					295					300								
Arg	Arg	Lys	Tyr	Gly	Arg	Cys	His	Phe	Trp	Phe	Thr	Thr	Lys	Ser	Trp				
305					310					315					320				
Lys	Pro	Ser	Ser	Glu	Gln	Met	Asp	Gln	Asp	His	Ser	Ser	Ser	Asp	Ser				
				325					330					335					
Trp	Asn	Asn	Asn	Asp	Ala	Ala	Ala	Ser	Leu	Glu	Asn	Ser	Ala	Ser	Ser				
	340							345					350						
Asp	Glu	Glu	Asp	Ile	Gly	Ser	Glu	Thr	Arg	Ala	Ile	Tyr	Ser	Ile	Val				
	355						360					365							
Leu	Lys	Leu	Pro	Gly	His	Ser	Thr	Ile	Leu	Asn	Ser	Thr	Lys	Leu	Pro				
	370					375					380								
Ser	Ser	Asp	Asn	Leu	Gln	Val	Pro	Glu	Glu	Glu	Leu	Gly	Met	Val	Asp				
385					390					395					400				
Leu	Glu	Arg	Lys	Ala	Asp	Lys	Leu	Gln	Ala	Gln	Lys	Ser	Val	Asp	Asp				
				405					410					415					
Gly	Gly	Ser	Phe	Pro	Lys	Ser	Phe	Ser	Lys	Leu	Pro	Ile	Gln	Leu	Glu				
			420					425					430						
Ser	Ala	Val	Asp	Thr	Ala	Lys	Thr	Ser	Asp	Val	Asn	Ser	Ser	Val	Gly				

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 ctctgtctacg tcaacagcac catcaaccct gcctgtctatg ctctgtgcaa cgccaccttt 1380
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 <211> 479
 <212> PRT
 <213> Homo sapiens

<400> 519
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 Val Phe Ile Ala Thr Val Thr Gly Ser Leu Ser Leu Val Thr Val Val
 35 40 45
 Gly Asn Ile Leu Val Met Leu Ser Ile Lys Val Asn Arg Gln Leu Gln
 50 55 60
 Thr Val Asn Asn Tyr Phe Leu Phe Ser Leu Ala Cys Ala Asp Leu Ile
 65 70 75 80
 Ile Gly Ala Phe Ser Met Asn Leu Tyr Thr Val Tyr Ile Ile Lys Gly
 85 90 95
 Tyr Trp Pro Leu Gly Ala Val Val Cys Asp Leu Trp Leu Ala Leu Asp
 100 105 110
 Tyr Val Val Ser Asn Ala Ser Val Met Asn Leu Leu Ile Ile Ser Phe
 115 120 125
 Asp Arg Tyr Phe Cys Val Thr Lys Pro Leu Thr Tyr Pro Ala Arg Arg
 130 135 140
 Thr Thr Lys Met Ala Gly Leu Met Ile Ala Ala Ala Trp Val Leu Ser
 145 150 155 160
 Phe Val Leu Trp Ala Pro Ala Ile Leu Phe Trp Gln Phe Val Val Gly
 165 170 175
 Lys Arg Thr Val Pro Asp Asn Gln Cys Phe Ile Gln Phe Leu Ser Asn
 180 185 190
 Pro Ala Val Thr Phe Gly Thr Ala Ile Ala Ala Phe Tyr Leu Pro Val
 195 200 205
 Val Ile Met Thr Val Leu Tyr Ile His Ile Ser Leu Ala Ser Arg Ser
 210 215 220
 Arg Val His Lys His Arg Pro Glu Gly Pro Lys Glu Lys Lys Ala Lys
 225 230 235 240
 Thr Leu Ala Phe Leu Lys Ser Pro Leu Met Lys Gln Ser Val Lys Lys

				245				250					255				
Pro	Pro	Pro	Gly 260	Glu	Ala	Ala	Arg	Glu 265	Glu	Leu	Arg	Asn	Gly 270	Lys	Leu		
Glu	Glu	Ala 275	Pro	Pro	Pro	Ala	Leu 280	Pro	Pro	Pro	Pro	Arg 285	Pro	Val	Ala		
Asp	Lys 290	Asp	Thr	Ser	Asn	Glu 295	Ser	Ser	Ser	Gly	Ser 300	Ala	Thr	Gln	Asn		
Thr 305	Lys	Glu	Arg	Pro	Ala 310	Thr	Glu	Leu	Ser	Thr 315	Thr	Glu	Ala	Thr	Thr 320		
Pro	Ala	Met	Pro	Ala 325	Pro	Pro	Leu	Gln 330	Pro	Arg	Ala	Leu	Asn	Pro 335	Ala		
Ser	Arg	Trp	Ser 340	Lys	Ile	Gln	Ile	Val 345	Thr	Lys	Gln	Thr	Gly 350	Asn	Glu		
Cys	Val	Thr 355	Ala	Ile	Glu	Ile	Val 360	Pro	Ala	Thr	Pro	Ala 365	Gly	Met	Arg		
Pro 370	Ala	Ala	Asn	Val	Ala	Arg 375	Lys	Phe	Ala	Ser	Ile 380	Ala	Arg	Asn	Gln		
Val 385	Arg	Lys	Lys	Arg	Gln 390	Met	Ala	Ala	Arg	Glu 395	Arg	Lys	Val	Lys	Arg 400		
Thr	Ile	Phe	Ala	Ile 405	Leu	Leu	Ala	Phe	Ile 410	Leu	Thr	Trp	Thr 415	Pro	Tyr		
Asn	Val	Met	Val 420	Leu	Val	Asn	Thr	Phe 425	Cys	Gln	Ser	Cys	Ile 430	Pro	Asp		
Thr	Val	Trp 435	Ser	Ile	Gly	Tyr	Trp 440	Leu	Cys	Tyr	Val	Asn 445	Ser	Thr	Ile		
Asn 450	Pro	Ala	Cys	Tyr	Ala	Leu 455	Cys	Asn	Ala	Thr	Phe 460	Lys	Lys	Thr	Phe		
Arg 465	His	Leu	Leu	Leu	Cys 470	Gln	Tyr	Arg	Asn	Ile 475	Gly	Thr	Ala	Arg			

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<210> 520
<211> 1599
<212> DNA
<213> Homo sapiens
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ctcaagacag	ttaacaacta	ttacctgtct	agcttagcct	gtgcagatct	catcattgga	240
atcttctcca	tgaacctcta	caccacctac	atcctcatgg	gacgtggg	tctcgggagt	300
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145		150		155		160
Leu Trp Ala Pro	Ala Ile Leu Cys Trp	Gln Tyr Leu Val	Gly Lys Arg			
	165	170	175			
Thr Val Pro Leu	Asp Glu Cys Gln Ile	Gln Phe Leu Ser	Glu Pro Thr			
	180	185	190			
Ile Thr Phe Gly	Thr Ala Ile Ala	Phe Tyr Ile Pro	Val Ser Val			
	195	200	205			
Met Thr Ile Leu	Tyr Cys Arg Ile	Tyr Arg Glu Thr	Glu Lys Arg Thr			
	210	215	220			
Lys Asp Leu Ala	Asp Leu Gln Gly Ser	Asp Ser Val Thr	Lys Ala Glu			
	225	230	235	240		
Lys Arg Lys Pro	Ala His Arg Ala	Leu Phe Arg Ser	Cys Leu Arg Cys			
	245	250	255			
Pro Arg Pro Thr	Leu Ala Gln Arg	Glu Arg Asn Gln	Ala Ser Trp Ser			
	260	265	270			
Ser Ser Arg Arg	Ser Thr Ser Thr	Thr Gly Lys Pro	Ser Gln Ala Thr			
	275	280	285			
Gly Pro Ser Ala	Asn Trp Ala Lys	Ala Glu Gln Leu	Thr Thr Cys Ser			
	290	295	300			
Ser Tyr Pro Ser	Ser Glu Asp Glu	Asp Lys Pro Ala	Thr Asp Pro Val			
	305	310	315	320		
Leu Gln Val Val	Tyr Lys Ser Gln	Gly Lys Glu Ser	Pro Gly Glu Glu			
	325	330	335			
Phe Ser Ala Glu	Glu Thr Glu Glu	Thr Phe Val Lys	Ala Glu Thr Glu			
	340	345	350			
Lys Ser Asp Tyr	Asp Thr Pro Asn	Tyr Leu Leu Ser	Pro Ala Ala Ala			
	355	360	365			
His Arg Pro Lys	Ser Gln Lys Cys	Val Ala Tyr Lys	Phe Arg Leu Val			
	370	375	380			
Val Lys Ala Asp	Gly Asn Gln Glu	Thr Asn Asn Gly	Cys His Lys Val			
	385	390	395	400		
Lys Ile Met Pro	Cys Pro Phe Pro	Val Ala Lys Glu	Pro Ser Thr Lys			
	405	410	415			
Gly Leu Asn Pro	Asn Pro Ser His	Gln Met Thr Lys	Arg Lys Arg Val			
	420	425	430			
Val Leu Val Lys	Glu Arg Lys Ala	Lys Gln Thr Leu	Ser Ala Ile Leu			
	435	440	445			
Leu Ala Phe Ile	Ile Thr Trp Thr	Pro Tyr Asn Ile	Met Val Leu Val			

450

455

460

Ser Thr Phe Cys Asp Lys Cys Val Pro Val Thr Leu Trp His Leu Gly
465 470 475 480

Tyr Trp Leu Cys Tyr Val Asn Ser Thr Val Asn Pro Ile Cys Tyr Ala
485 490 495

Leu Cys Asn Arg Thr Phe Arg Lys Thr Phe Lys Met Leu Leu Leu Cys
500 505 510

Arg Trp Lys Lys Lys Lys Val Glu Glu Lys Leu Tyr Trp Gln Gly Asn
515 520 525

Ser Lys Leu Pro
530

<210> 522

<211> 972

<212> DNA

<213> Homo sapiens

<400> 522

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ctggccgtgg tcaggaacgg caacctgcac tccccgatgt acttctttct ctgcagcctg 240
gcggtggccg acatgctggt aagtgtgtcc aatgccctgg agaccatcat gatcgccatc 300
gtccacagcg actacctgac cttcgaggac cagtttatcc agcacatgga caacatcttc 360
gactccatga tctgcatctc cctgggtggc tccatctgca acctcctggc catcgccgtc 420
gacaggtacg tcaccatctt ttacgcgctc cgctaccaca gcatcatgac cgtgagggaag 480
gocctcacct tgatcgtggc catctgggtc tgctgcggcg tctgtggcgt ggtgttcac 540
gtctactcgg agagcaaaat ggtcattgtg tgccatcatca ccatgttctt cgccatgatg 600
ctctcatgg gcacctcta cgtgcacatg ttctctttg cgcggtctgca cgtcaagcgc 660
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cacctgggtc tcatcatcac ctgccccacc aacctctact gcatctgcta cactgcccac 840
ttcaaacact acctggctct catcatgtgc aactccgtca tcgaccact catctacgct 900
ttccggagcc tggaattgcg caacaccttt aggagattc tctgtggctg caacggcatg 960
aacttgggat ag 972

<210> 523

<211> 323

<212> PRT

<213> Homo sapiens

<400> 523

Met Asn Ala Ser Cys Cys Leu Pro Ser Val Gln Pro Thr Leu Pro Asn
1 5 10 15

Gly Ser Glu His Leu Gln Ala Pro Phe Phe Ser Asn Gln Ser Ser Ser
20 25 30

Ala Phe Cys Glu Gln Val Phe Ile Lys Pro Glu Ile Phe Leu Ser Leu
35 40 45

Gly Ile Val Ser Leu Leu Glu Asn Ile Leu Val Ile Leu Ala Val Val
50 55 60

Arg Asn Gly Asn Leu His Ser Pro Met Tyr Phe Phe Leu Cys Ser Leu
65 70 75 80

Ala Val Ala Asp Met Leu Val Ser Val Ser Asn Ala Leu Glu Thr Ile
85 90 95

Met Ile Ala Ile Val His Ser Asp Tyr Leu Thr Phe Glu Asp Gln Phe
100 105 110

Ile Gln His Met Asp Asn Ile Phe Asp Ser Met Ile Cys Ile Ser Leu
115 120 125

Val Ala Ser Ile Cys Asn Leu Leu Ala Ile Ala Val Asp Arg Tyr Val
130 135 140

Thr Ile Phe Tyr Ala Leu Arg Tyr His Ser Ile Met Thr Val Arg Lys
145 150 155 160

Ala Leu Thr Leu Ile Val Ala Ile Trp Val Cys Cys Gly Val Cys Gly
165 170 175

Val Val Phe Ile Val Tyr Ser Glu Ser Lys Met Val Ile Val Cys Leu
180 185 190

Ile Thr Met Phe Phe Ala Met Met Leu Leu Met Gly Thr Leu Tyr Val
195 200 205

His Met Phe Leu Phe Ala Arg Leu His Val Lys Arg Ile Ala Ala Leu
210 215 220

Pro Pro Ala Asp Gly Val Ala Pro Gln Gln His Ser Cys Met Lys Gly
225 230 235 240

Lys Val Thr Ile Thr Ile Leu Leu Gly Val Phe Ile Phe Cys Trp Ala
245 250 255

Pro Phe Phe Leu His Leu Val Leu Ile Ile Thr Cys Pro Thr Asn Pro
260 265 270

Tyr Cys Ile Cys Tyr Thr Ala His Phe Asn Thr Tyr Leu Val Leu Ile
275 280 285

Met Cys Asn Ser Val Ile Asp Pro Leu Ile Tyr Ala Phe Arg Ser Leu
290 295 300

Glu Leu Arg Asn Thr Phe Arg Glu Ile Leu Cys Gly Cys Asn Gly Met
305 310 315 320

Asn Leu Gly

<210> 524

<211> 1224
<212> DNA
<213> Homo sapiens

<400> 524
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gaaccaatc agttcgtgca accagcctgg caaattgtcc tttgggcagc tgcctacacg 120
gtcattgtgg tgacctctgt ggtgggcaac gtggtagtga tgtggatcat cttagcccac 180
aaaagaatga ggacagtgc gaactatatt ctggtgaacc tggccttcgc ggaggcctcc 240
atggctgcat tcaatacagt ggtgaacttc acctatgctg tccacaacga atggtactac 300
ggcctgttct actgcaagtt ccacaacttc tttcccatcg ccgctgtctt cgccagtatc 360
tactccatga cggctgtggc ctttgatagg tacatggcca tcatacatcc cctccagccc 420
cggctgtcag ccacagccac caaagtggc atctgtgtca tctgggtcct ggctctcctg 480
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actgtgctga tctacttcct cccctgctg gtgattggct atgcatacac cgtagtggga 660
atcacactat gggccagtga gatccccggg gactcctctg accgctacca cgagcaagtc 720
tctgccaaagc gcaaggtgaa gaaaatgatg attgtcgtgg tgtgcacctt cgccatctgc 780
tggtgcctt tccacatctt cttcctcctg ccctacatca acccagatct ctacctgaag 840
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gtggtggggg ccacagagga ggagccagag gacggcccca aggccacacc ctgctccctg 1140
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ttctcctcca atgtgctctc ctac 1224

<210> 525
<211> 407
<212> PRT
<213> Homo sapiens

<400> 525
Met Asp Asn Val Leu Pro Val Asp Ser Asp Leu Ser Pro Asn Ile Ser
1 5 10 15
Thr Asn Thr Ser Glu Pro Asn Gln Phe Val Gln Pro Ala Trp Gln Ile
20 25 30
Val Leu Trp Ala Ala Ala Tyr Thr Val Ile Val Val Thr Ser Val Val
35 40 45
Gly Asn Val Val Val Met Trp Ile Ile Leu Ala His Lys Arg Met Arg
50 55 60
Thr Val Thr Asn Tyr Phe Leu Val Asn Leu Ala Phe Ala Glu Ala Ser
65 70 75 80
Met Ala Ala Phe Asn Thr Val Val Asn Phe Thr Tyr Ala Val His Asn
85 90 95
Glu Trp Tyr Tyr Gly Leu Phe Tyr Cys Lys Phe His Asn Phe Phe Pro
100 105 110
Ile Ala Ala Val Phe Ala Ser Ile Tyr Ser Met Thr Ala Val Ala Phe
115 120 125

<211> 1197
 <212> DNA
 <213> Homo sapiens

<400> 526
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 ctggccctgg tgctggtggc cgtgacgggt aatgccatcg tcatctggat catcctggcc 180
 catcggagga tgcgcacagt caccaactac ttcacgtcga atctggcgct ggctgacctc 240
 tgcattggctg ccttcaatgc cgccttcaac tttgtctatg ccagccacaa catctggtac 300
 tttggccgtg ccttctgcta cttccagaac ctcttcccca tcacagccat gtttgtcagc 360
 atctactcca tgaccgccat tgctgccgac aggtacatgg ccatcgcca ccccttccag 420
 cctcggcttt cagctcccag caccaaggcg gttattgctg gcactctggct ggtggctctc 480
 gccctggcct cccctcagtg cttctactcc accgtcacca tggaccaggg tgccaccaag 540
 tgcgtggtgg cctggcccga agacagcggg ggcaagaagc tcctcctgta ccacctcgtg 600
 gtgatcgccc tcatctactt cctgccgctc gcggtgatgt ttgtagccta cagcgtcatc 660
 ggccctcagc cctggaggcg cgcagtgcgc ggacatcagg cgcacgggtg caacctccgc 720
 catctgcagg ccaagaagaa gtttaagaag accatggtgc tgggtggtgct gacgtttgcc 780
 atctgtggc tgccctacca cctctacttc atcctgggca gcttccagga ggacatctac 840
 tgccacaagt tcatccagca agtctacctg gcactcttct ggttggccat gagctctacc 900
 atgtacaatc ccatcatcta ctgctgtctc aaccacaggt ttcgctctgg gttccggctt 960
 gccttccgct gctgcccatg ggtcacaccc accaaggaag ataagctoga gctgactccc 1020
 acgacctccc tctccacgag agtcaacagg tgtcacacta aggagacttt gttcatggct 1080
 ggggacacag cccctccga ggctaccagt ggggagggcg ggcgtcccca ggatggatca 1140
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<210> 527
 <211> 398
 <212> PRT
 <213> Homo sapiens

<400> 527
 Met Gly Thr Cys Asp Ile Val Thr Glu Ala Asn Ile Ser Ser Gly Pro
 1 5 10 15
 Glu Ser Asn Thr Thr Gly Ile Thr Ala Phe Ser Met Pro Ser Trp Gln
 20 25 30
 Leu Ala Leu Trp Ala Pro Ala Tyr Leu Ala Leu Val Leu Val Ala Val
 35 40 45
 Thr Gly Asn Ala Ile Val Ile Trp Ile Ile Leu Ala His Arg Arg Met
 50 55 60
 Arg Thr Val Thr Asn Tyr Phe Ile Val Asn Leu Ala Leu Ala Asp Leu
 65 70 75 80
 Cys Met Ala Ala Phe Asn Ala Ala Phe Asn Phe Val Tyr Ala Ser His
 85 90 95
 Asn Ile Trp Tyr Phe Gly Arg Ala Phe Cys Tyr Phe Gln Asn Leu Phe
 100 105 110
 Pro Ile Thr Ala Met Phe Val Ser Ile Tyr Ser Met Thr Ala Ile Ala
 115 120 125

Ala Asp Arg Tyr Met Ala Ile Val His Pro Phe Gln Pro Arg Leu Ser
130 135 140

Ala Pro Ser Thr Lys Ala Val Ile Ala Gly Ile Trp Leu Val Ala Leu
145 150 155 160

Ala Leu Ala Ser Pro Gln Cys Phe Tyr Ser Thr Val Thr Met Asp Gln
165 170 175

Gly Ala Thr Lys Cys Val Val Ala Trp Pro Glu Asp Ser Gly Gly Lys
180 185 190

Thr Leu Leu Leu Tyr His Leu Val Val Ile Ala Leu Ile Tyr Phe Leu
195 200 205

Pro Leu Ala Val Met Phe Val Ala Tyr Ser Val Ile Gly Leu Thr Leu
210 215 220

Trp Arg Arg Ala Val Pro Gly His Gln Ala His Gly Ala Asn Leu Arg
225 230 235 240

His Leu Gln Ala Lys Lys Lys Phe Lys Lys Thr Met Val Leu Val Val
245 250 255

Leu Thr Phe Ala Ile Cys Trp Leu Pro Tyr His Leu Tyr Phe Ile Leu
260 265 270

Gly Ser Phe Gln Glu Asp Ile Tyr Cys His Lys Phe Ile Gln Gln Val
275 280 285

Tyr Leu Ala Leu Phe Trp Leu Ala Met Ser Ser Thr Met Tyr Asn Pro
290 295 300

Ile Ile Tyr Cys Cys Leu Asn His Arg Phe Arg Ser Gly Phe Arg Leu
305 310 315 320

Ala Phe Arg Cys Cys Pro Trp Val Thr Pro Thr Lys Glu Asp Lys Leu
325 330 335

Glu Leu Thr Pro Thr Thr Ser Leu Ser Thr Arg Val Asn Arg Cys His
340 345 350

Thr Lys Glu Thr Leu Phe Met Ala Gly Asp Thr Ala Pro Ser Glu Ala
355 360 365

Thr Ser Gly Glu Ala Gly Arg Pro Gln Asp Gly Ser Gly Leu Trp Phe
370 375 380

Gly Tyr Gly Leu Leu Ala Pro Thr Lys Thr His Val Glu Ile
385 390 395

<210> 528
<211> 1398
<212> DNA
<213> Homo sapiens

Phe Ser Asp Ala Ser Met Ala Ala Phe Asn Thr Leu Val Asn Phe Ile
 130 135 140
 Tyr Ala Leu His Ser Glu Trp Tyr Phe Gly Ala Asn Tyr Cys Arg Phe
 145 150 155 160
 Gln Asn Phe Phe Pro Ile Thr Ala Val Phe Ala Ser Ile Tyr Ser Met
 165 170 175
 Thr Ala Ile Ala Val Asp Arg Tyr Met Ala Ile Ile Asp Pro Leu Lys
 180 185 190
 Pro Arg Leu Ser Ala Thr Ala Thr Lys Ile Val Ile Gly Ser Ile Trp
 195 200 205
 Ile Leu Ala Phe Leu Leu Ala Phe Pro Gln Cys Leu Tyr Ser Lys Thr
 210 215 220
 Lys Val Met Pro Gly Arg Thr Leu Cys Phe Val Gln Trp Pro Glu Gly
 225 230 235 240
 Pro Lys Gln His Phe Thr Tyr His Ile Ile Val Ile Ile Leu Val Tyr
 245 250 255
 Cys Phe Pro Leu Leu Ile Met Gly Ile Thr Tyr Thr Ile Val Gly Ile
 260 265 270
 Thr Leu Trp Gly Gly Glu Ile Pro Gly Asp Thr Cys Asp Lys Tyr His
 275 280 285
 Glu Gln Leu Lys Ala Lys Arg Lys Val Lys Lys Met Met Ile Ile Val
 290 295 300
 Val Met Thr Phe Ala Ile Cys Trp Leu Pro Tyr His Ile Tyr Phe Ile
 305 310 315 320
 Leu Thr Ala Ile Tyr Gln Gln Leu Asn Arg Trp Lys Tyr Ile Gln Gln
 325 330 335
 Val Tyr Leu Ala Ser Phe Trp Leu Ala Met Ser Ser Thr Met Tyr Asn
 340 345 350
 Pro Ile Ile Tyr Cys Cys Leu Asn Lys Arg Phe Arg Ala Gly Phe Lys
 355 360 365
 Arg Ala Phe Arg Trp Cys Pro Phe Ile Lys Val Ser Ser Tyr Asp Glu
 370 375 380
 Leu Glu Leu Lys Thr Thr Arg Phe His Pro Asn Arg Gln Ser Ser Met
 385 390 395 400
 Tyr Thr Val Thr Arg Met Glu Ser Met Thr Val Val Phe Asp Pro Asn
 405 410 415
 Asp Ala Asp Thr Thr Arg Ser Ser Arg Lys Lys Arg Ala Thr Pro Arg
 420 425 430

Asp Pro Ser Phe Asn Gly Cys Ser Arg Arg Asn Ser Lys Ser Ala Ser
 435 440 445

Ala Thr Ser Ser Phe Ile Ser Ser Pro Tyr Thr Ser Val Asp Glu Tyr
 450 455 460

Ser
 465

<210> 530
 <211> 1173
 <212> DNA
 <213> Homo sapiens

<400> 530
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 gttccccgagg ggtgggaaaag ggatttctctg cccggcctcgg acggggaccac cacggagttg 120
 gtgatccgct gtgtgatccc gtccctctac ctgctcatca tcaccgtggg cttgctgggc 180
 aacatcatgc tggatgaagat cttcatcacc aacagcgcca tgaggagcgt ccccaacatc 240
 ttcattctcta acctggcggc cggggacttg ctgctgctgc tcacctgcgt cccgggtggac 300
 gcctcgcgct acttcttcga cgagtggatg tttggcaagg tgggctgcaa actgatccct 360
 gtcattccagc tcaattccgt ggggggtttcc gtgttccactc tcaactgcct cagcgccgac 420
 aggtacagag ccattcgtaa ccccatggac atgcagacgt caggggcatt gctgcggacc 480
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 taccctcaaa cagatgaatt acatccaaag attcattcag tgcctatttt cttgggtctat 660
 ttcctcatac cacttgctat tattagcatt tattattatc atattgcaa gaccttaatt 720
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 cggaaacgcc tgaaaaaaat tgtgcttgctc tttgtgggct gtttcatctt ctgttggttt 840
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 tgtgggagga agtcctatca agagagagga accagctacc tactcagctc ttcagcgggtg 1080
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 gggcacagca tgaagcagga aatggcaatg tga 1173

<210> 531
 <211> 390
 <212> PRT
 <213> Homo sapiens

<400> 531
 Met Pro Ser Lys Ser Leu Ser Asn Leu Ser Val Thr Thr Gly Ala Asn
 1 5 10 15
 Glu Ser Gly Ser Val Pro Glu Gly Trp Glu Arg Asp Phe Leu Pro Ala
 20 25 30
 Ser Asp Gly Thr Thr Thr Glu Leu Val Ile Arg Cys Val Ile Pro Ser
 35 40 45
 Leu Tyr Leu Leu Ile Ile Thr Val Gly Leu Leu Gly Asn Ile Met Leu
 50 55 60
 Val Lys Ile Phe Ile Thr Asn Ser Ala Met Arg Ser Val Pro Asn Ile

65		70		75		80
Phe Ile Ser Asn Leu Ala Ala Gly Asp Leu Leu Leu Leu Leu Thr Cys						
	85			90		95
Val Pro Val Asp Ala Ser Arg Tyr Phe Phe Asp Glu Trp Met Phe Gly						
	100			105		110
Lys Val Gly Cys Lys Leu Ile Pro Val Ile Gln Leu Thr Ser Val Gly						
	115			120		125
Val Ser Val Phe Thr Leu Thr Ala Leu Ser Ala Asp Arg Tyr Arg Ala						
	130			135		140
Ile Val Asn Pro Met Asp Met Gln Thr Ser Gly Ala Leu Leu Arg Thr						
	145			150		155
Cys Val Lys Ala Met Gly Ile Trp Val Val Ser Val Leu Leu Ala Val						
	165			170		175
Pro Glu Ala Val Phe Ser Glu Val Ala Arg Ile Ser Ser Leu Asp Asn						
	180			185		190
Ser Ser Phe Thr Ala Cys Ile Pro Tyr Pro Gln Thr Asp Glu Leu His						
	195			200		205
Pro Lys Ile His Ser Val Leu Ile Phe Leu Val Tyr Phe Leu Ile Pro						
	210			215		220
Leu Ala Ile Ile Ser Ile Tyr Tyr Tyr His Ile Ala Lys Thr Leu Ile						
	225			230		235
Lys Ser Ala His Asn Leu Pro Gly Glu Tyr Asn Glu His Thr Lys Lys						
	245			250		255
Gln Met Glu Thr Arg Lys Arg Leu Lys Lys Ile Val Leu Val Phe Val						
	260			265		270
Gly Cys Phe Ile Phe Cys Trp Phe Pro Asn His Ile Leu Tyr Met Tyr						
	275			280		285
Arg Ser Phe Asn Tyr Asn Glu Ile Asp Pro Ser Leu Gly His Met Ile						
	290			295		300
Val Thr Leu Val Ala Arg Val Leu Ser Phe Gly Asn Ser Cys Val Asn						
	305			310		315
Pro Phe Ala Leu Tyr Leu Leu Ser Glu Ser Phe Arg Arg His Phe Asn						
	325			330		335
Ser Gln Leu Cys Cys Gly Arg Lys Ser Tyr Gln Glu Arg Gly Thr Ser						
	340			345		350
Tyr Leu Leu Ser Ser Ser Ala Val Arg Met Thr Ser Leu Lys Ser Asn						
	355			360		365
Ala Lys Asn Met Val Thr Asn Ser Val Leu Leu Asn Gly His Ser Met						

370

375

380

Lys Gln Glu Met Ala Met
385 390

<210> 532
<211> 1338
<212> DNA
<213> Homo sapiens

<400> 532
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cagtattttc tgattgggct ctatacattt gtaagtcttc ttggctttat ggggaatcta 180
cttattttta tggctctcat gaaaaagcgt aatcagaaga ctacggtaaa cttcctcata 240
ggcaatctgg ccttttctga tatcttggtt gtgctgtttt gctcaccttt cacactgacg 300
tctgtcttgc tggatcagtg gatgtttggc aaagtcagtgt gccatattat gccttttctt 360
caatgtgtgt cagttttggt ttcaacttta attttaatat caattgccat tgtcaggtat 420
catatgataa aacatcccat atctaataat ttaacagcaa accatggcta ctttctgata 480
gctactgtct ggacactagg ttttgccatc tgttctcccc ttccagtgtt tcacagtctt 540
gtggaacttc aagaaacatt tgggtcagca ttgctgagca gcaggatatt atgtgttgag 600
tcatggccat ctgattcata cagaattgcc tttactatct ctttattgct agttcagtat 660
attctgccct tagtttgtct tactgtaagt catacaagtg tctgcagaag tataagctgt 720
ggattgtcca acaaagaaaa cagacttgaa gaaaatgaga tgatcaactt aactcttcat 780
ccatccaaaa agagtgggcc tcaggtgaaa ctctctggca gccataaatg gagttattca 840
ttcatcaaaa aacacagaag aagatatagc aagaagacag catgtgtgtt acctgctcca 900
gaaagacctt ctcaagagaa ccactccaga atacttccag aaaacttttg ctctgtaaga 960
agtcagctct cttcatccag taagttcata ccaggggtcc ccacttgctt tgagataaaa 1020
cctgaagaaa attcagatgt tcatgaattg agagtaaaac gttctgttac aagaataaaa 1080
aagagatctc gaagtgttaa gtacagactg accatactga tattagtatt tgctgttagt 1140
tggatgccac tacacctttt ccatgtggta actgatttta atgacaatct tatttcaaat 1200
aggcatttca agttgggtga ttgcatttgt catttggttg gcatgatgtc ctgttgtctt 1260
aatccaattc tatatgggtt tcttaataat gggattaaag ctgatttagt gtcccttata 1320
cactgtcttc atatgtaa 1338

<210> 533
<211> 445
<212> PRT
<213> Homo sapiens

<400> 533
Met Asp Leu Glu Leu Asp Glu Tyr Tyr Asn Lys Thr Leu Ala Thr Glu
1 5 10 15
Asn Asn Thr Ala Ala Thr Arg Asn Ser Asp Phe Pro Val Trp Asp Asp
20 25 30
Tyr Lys Ser Ser Val Asp Asp Leu Gln Tyr Phe Leu Ile Gly Leu Tyr
35 40 45
Thr Phe Val Ser Leu Leu Gly Phe Met Gly Asn Leu Leu Ile Leu Met
50 55 60
Ala Leu Met Lys Lys Arg Asn Gln Lys Thr Thr Val Asn Phe Leu Ile
65 70 75 80

His Leu Phe His Val Val Thr Asp Phe Asn Asp Asn Leu Ile Ser Asn
385 390 395 400

Arg His Phe Lys Leu Val Tyr Cys Ile Cys His Leu Leu Gly Met Met
405 410 415

Ser Cys Cys Leu Asn Pro Ile Leu Tyr Gly Phe Leu Asn Asn Gly Ile
420 425 430

Lys Ala Asp Leu Val Ser Leu Ile His Cys Leu His Met
435 440 445

<210> 534
<211> 1257
<212> DNA
<213> Homo sapiens

<400> 534
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aacgcgtcgg agcgcgtcct ggccgcaccc agcagcgagc tggacgtgaa caccgacatc 180
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<210> 535
<211> 418
<212> PRT
<213> Homo sapiens

<400> 535
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20 25 30
Pro Gly Phe Gly Asn Ala Ser Gly Asn Ala Ser Glu Arg Val Leu Ala
35 40 45

Phe Tyr Val Ser Ser Thr Ile Asn Pro Ile Leu Tyr Asn Leu Val Ser
 355 360 365

Ala Asn Phe Arg His Ile Phe Leu Ala Thr Leu Ala Cys Leu Cys Pro
 370 375 380

Val Trp Arg Arg Arg Arg Lys Arg Pro Ala Phe Ser Arg Lys Ala Asp
 385 390 395 400

Ser Val Ser Ser Asn His Thr Leu Ser Ser Asn Ala Thr Arg Glu Thr
 405 410 415

Leu Tyr

<210> 536
 <211> 1233
 <212> DNA
 <213> Homo sapiens

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<210> 537
 <211> 410
 <212> PRT
 <213> Homo sapiens

<400> 537
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 1 5 10 15

Leu Ser Leu Asp Ala Arg Leu Gly Val Asp Thr Arg Leu Trp Ala Lys
 20 25 30

His Tyr Phe Tyr Met Val Thr Asn Thr Leu Phe Tyr Val Ser Ser Ala
340 345 350

Val Thr Pro Leu Leu Tyr Asn Ala Val Ser Ser Ser Phe Arg Lys Leu
355 360 365

Phe Leu Glu Ala Val Ser Ser Leu Cys Gly Glu His His Pro Met Lys
370 375 380

Arg Leu Pro Pro Lys Pro Gln Ser Pro Thr Leu Met Asp Thr Ala Ser
385 390 395 400

Gly Phe Gly Asp Pro Pro Glu Thr Arg Thr
405 410

<210> 538
<211> 1119
<212> DNA
<213> Homo sapiens

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gggagcgcct cgctccctcgc cctggcaatc gccatcacccg cgctctactc ggccgtgtgc 180
gccgtggggc tgctgggcaa cgtgcttgct atgttcggca tcgtccggta cactaagatg 240
aagacggcca ccaacatcta catcttcaac ctggccttag ccgatgcgct ggccaccagc 300
acgctgcctt tccagagtgc caagtacctg atggagacgt ggcccttcgg cgagctgctc 360
tgcaaggctg tgctctccat cgactactac aatatgttca ccagcatctt cacgctcacc 420
atgatgagtg ttgaccgcta catcgctgtc tgccaccctg tcaaggccct ggacttcgc 480
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cagttcccca gccccagctg gtactgggac acggtgacca agatctgcgt gttcctcttc 660
gccttcgtgg tgcccatcct catcatcacc gtgtgctatg gcctcatgct gctgcgcctg 720
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<210> 539
<211> 372
<212> PRT
<213> Homo sapiens

<400> 539
Met Glu Pro Ala Pro Ser Ala Gly Ala Glu Leu Gln Pro Pro Leu Phe
1 5 10 15

Ala Asn Ala Ser Asp Ala Tyr Pro Ser Ala Phe Pro Ser Ala Gly Ala
20 25 30

Asn Ala Ser Gly Pro Pro Gly Pro Gly Ser Ala Ser Ser Leu Ala Leu

350

Gly Arg Ala Ala
370

<400> 540						
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aaaatgaaga	cagccaccaa	tatttacatc	tttaacctgg	ccttggccga	cactctggtc	300
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cgggacgtgc	aggtgtctga	ccgcgtgcgc	agcattgcca	aggacgtggc	cctggcctgc	1080
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<210> 541
<211> 370
<212> PRT
<213> Homo sapiens
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His Leu Gln Gly Asn Leu Ser Leu Leu Ser Pro Asn His Ser Leu Leu
      20             25             30
Pro Pro His Leu Leu Leu Asn Ala Ser His Gly Ala Phe Leu Pro Leu
      35             40             45
Gly Leu Lys Val Thr Ile Val Gly Leu Tyr Leu Ala Val Cys Val Gly
      50             55             60
Gly Leu Leu Gly Asn Cys Leu Val Met Tyr Val Ile Leu Arg His Thr
      65             70             75             80

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<210> 542
 <211> 1143
 <212> DNA
 <213> Homo sapiens

<400> 542
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 atcatcacgg cgggtctact cgtagtgttc gtcgtgggct tgggtgggcaa ctgctgggtc 240
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 aacatgttca ccagcatctt caccctgacc atgatgagcg tggaccgcta cattgccgtg 480
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 tga 1143

<210> 543
 <211> 380
 <212> PRT
 <213> Homo sapiens

<400> 543
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 Ala Pro Ser Ala Cys Leu Pro Pro Asn Ser Ser Ala Trp Phe Pro Gly
 20 25 30
 Trp Ala Glu Pro Asp Ser Asn Gly Ser Ala Gly Ser Glu Asp Ala Gln
 35 40 45
 Leu Glu Pro Ala His Ile Ser Pro Ala Ile Pro Val Ile Ile Thr Ala
 50 55 60
 Val Tyr Ser Val Val Phe Val Val Gly Leu Val Gly Asn Ser Leu Val
 65 70 75 80
 Met Phe Val Ile Ile Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile
 85 90 95
 Tyr Ile Phe Asn Leu Ala Leu Ala Asp Ala Leu Val Thr Thr Thr Met
 100 105 110
 Pro Phe Gln Ser Thr Val Tyr Leu Met Asn Ser Trp Pro Phe Gly Asp

115	120	125
Val Leu Cys Lys Ile Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr		
130	135	140
Ser Ile Phe Thr Leu Thr Met Met Ser Val Asp Arg Tyr Ile Ala Val		
145	150	155
Cys His Pro Val Lys Ala Leu Asp Phe Arg Thr Pro Leu Lys Ala Lys		
	165	170
Ile Ile Asn Ile Cys Ile Trp Leu Leu Ser Ser Ser Val Gly Ile Ser		
	180	185
Ala Ile Val Leu Gly Gly Thr Lys Val Arg Glu Asp Val Asp Val Ile		
	195	200
Glu Cys Ser Leu Gln Phe Pro Asp Asp Asp Tyr Ser Trp Trp Asp Leu		
	210	215
Phe Met Lys Ile Cys Val Phe Ile Phe Ala Phe Val Ile Pro Val Leu		
	225	230
Ile Ile Ile Val Cys Tyr Thr Leu Met Ile Leu Arg Leu Lys Ser Val		
	245	250
Arg Leu Leu Ser Gly Ser Arg Glu Lys Asp Arg Asn Leu Arg Arg Ile		
	260	265
Lys Arg Leu Val Leu Val Val Val Ala Val Phe Val Val Cys Trp Thr		
	275	280
Pro Ile His Ile Phe Ile Leu Val Glu Ala Leu Gly Ser Thr Ser His		
	290	295
Ser Thr Ala Ala Leu Ser Ser Tyr Tyr Phe Cys Ile Ala Leu Gly Tyr		
	305	310
Thr Asn Ser Ser Leu Asn Pro Ile Leu Tyr Ala Phe Leu Asp Glu Asn		
	325	330
Phe Lys Arg Cys Phe Arg Asp Phe Cys Phe Pro Leu Lys Met Arg Met		
	340	345
Glu Arg Gln Ser Thr Ser Arg Val Arg Asn Thr Val Gln Asp Pro Ala		
	355	360
Tyr Leu Arg Asp Ile Asp Gly Met Asn Lys Pro Val		
	370	375

<210> 544
 <211> 1203
 <212> DNA
 <213> Homo sapiens
 <400> 544

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<210> 545
 <211> 400
 <212> PRT
 <213> Homo sapiens

<400> 545

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			20					25					30		
Asn	Leu	Ser	His	Leu	Asp	Gly	Asn	Leu	Ser	Asp	Pro	Cys	Gly	Pro	Asn
		35					40					45			
Arg	Thr	Asn	Leu	Gly	Gly	Arg	Asp	Ser	Leu	Cys	Pro	Pro	Thr	Gly	Ser
		50				55					60				
Pro	Ser	Met	Ile	Thr	Ala	Ile	Thr	Ile	Met	Ala	Leu	Tyr	Ser	Ile	Val
	65				70					75				80	
Cys	Val	Val	Gly	Leu	Phe	Gly	Asn	Phe	Leu	Val	Met	Tyr	Val	Ile	Val
				85					90					95	
Arg	Tyr	Thr	Lys	Met	Lys	Thr	Ala	Thr	Asn	Ile	Tyr	Ile	Phe	Asn	Leu
			100					105					110		
Ala	Leu	Ala	Asp	Ala	Leu	Ala	Thr	Ser	Thr	Leu	Pro	Phe	Gln	Ser	Val
		115					120					125			
Asn	Tyr	Leu	Met	Gly	Thr	Trp	Pro	Phe	Gly	Thr	Ile	Leu	Cys	Lys	Ile
		130				135					140				
Val	Ile	Ser	Ile	Asp	Tyr	Tyr	Asn	Met	Phe	Thr	Ser	Ile	Phe	Thr	Leu

145		150		155		160
Cys Thr Met Ser Val Asp Arg Tyr Ile Ala Val Cys His Pro Val Lys						
	165			170		175
Ala Leu Asp Phe Arg Thr Pro Arg Asn Ala Lys Ile Ile Asn Val Cys						
	180			185		190
Asn Trp Ile Leu Ser Ser Ala Ile Gly Leu Pro Val Met Phe Met Ala						
	195			200		205
Thr Thr Lys Tyr Arg Gln Gly Ser Ile Asp Cys Thr Leu Thr Phe Ser						
	210			215		220
His Pro Thr Trp Tyr Trp Glu Asn Leu Val Lys Ile Cys Val Phe Ile						
	225			230		235
Phe Ala Phe Ile Met Pro Val Leu Ile Ile Thr Val Cys Tyr Gly Leu						
	245			250		255
Met Ile Leu Arg Leu Lys Ser Val Arg Met Leu Ser Gly Ser Lys Glu						
	260			265		270
Lys Asp Arg Asn Leu Arg Arg Ile Lys Arg Met Val Leu Val Val Val						
	275			280		285
Ala Val Phe Ile Val Cys Trp Thr Pro Ile His Ile Tyr Val Ile Ile						
	290			295		300
Lys Ala Leu Val Thr Ile Pro Glu Thr Thr Phe Gln Thr Val Ser Trp						
	305			310		315
His Phe Cys Ile Ala Leu Gly Tyr Thr Asn Ser Cys Leu Asn Pro Val						
	325			330		335
Leu Tyr Ala Phe Leu Asp Glu Asn Phe Lys Arg Cys Phe Arg Glu Phe						
	340			345		350
Cys Ile Pro Thr Ser Ser Asn Ile Glu Gln Gln Asn Ser Thr Arg Ile						
	355			360		365
Arg Gln Asn Thr Arg Asp His Pro Ser Thr Ala Asn Thr Val Asp Arg						
	370			375		380
Thr Asn His Gln Leu Glu Asn Leu Glu Ala Glu Thr Ala Pro Leu Pro						
	385			390		395
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<210> 546
 <211> 1182
 <212> DNA
 <213> Homo sapiens
 <400> 546

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<210> 547
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 547
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 20 25 30
 Asn Leu Ser His Leu Asp Gly Asn Leu Ser Asp Pro Cys Gly Pro Asn
 35 40 45
 Arg Thr Asn Leu Gly Gly Arg Asp Ser Leu Cys Pro Pro Thr Gly Ser
 50 55 60
 Pro Ser Met Ile Thr Ala Ile Thr Ile Met Ala Leu Tyr Ser Ile Val
 65 70 75 80
 Cys Val Val Gly Leu Phe Gly Asn Phe Leu Val Met Tyr Val Ile Val
 85 90 95
 Arg Tyr Thr Lys Met Lys Thr Ala Thr Asn Ile Tyr Ile Phe Asn Leu
 100 105 110
 Ala Leu Ala Asp Ala Leu Ala Thr Ser Thr Leu Pro Phe Gln Ser Val
 115 120 125
 Asn Tyr Leu Met Gly Thr Trp Pro Phe Gly Thr Ile Leu Cys Lys Ile
 130 135 140
 Val Ile Ser Ile Asp Tyr Tyr Asn Met Phe Thr Ser Ile Phe Thr Leu
 145 150 155 160

	165		170		175										
Val	Pro	Gln	Ala	Ala	Val	Met	Glu	Cys	Ser	Ser	Val	Leu	Pro	Glu	Leu
			180					185					190		
Ala	Asn	Arg	Thr	Arg	Leu	Phe	Ser	Val	Cys	Asp	Glu	Arg	Trp	Ala	Asp
		195					200					205			
Asp	Leu	Tyr	Pro	Lys	Ile	Tyr	His	Ser	Cys	Phe	Phe	Ile	Val	Thr	Tyr
	210					215					220				
Leu	Ala	Pro	Leu	Gly	Leu	Met	Ala	Met	Ala	Tyr	Phe	Gln	Ile	Phe	Arg
225					230					235					240
Lys	Leu	Trp	Gly	Arg	Gln	Ile	Pro	Gly	Thr	Thr	Ser	Ala	Leu	Val	Arg
				245					250						255
Asn	Trp	Lys	Arg	Pro	Ser	Asp	Gln	Leu	Gly	Asp	Leu	Glu	Gln	Gly	Leu
			260					265						270	
Ser	Gly	Glu	Pro	Gln	Pro	Arg	Gly	Arg	Ala	Phe	Leu	Ala	Glu	Val	Lys
		275					280					285			
Gln	Met	Arg	Ala	Arg	Arg	Lys	Thr	Lys	Lys	Met	Leu	Met	Val	Val	Leu
	290					295					300				
Leu	Val	Phe	Ala	Leu	Cys	Tyr	Leu	Pro	Ile	Ser	Val	Leu	Asn	Val	Leu
305					310					315					320
Lys	Arg	Val	Phe	Gly	Met	Phe	Arg	Gln	Ala	Ser	Asp	Arg	Glu	Ala	Val
				325					330					335	
Tyr	Ala	Cys	Phe	Thr	Phe	Ser	His	Trp	Leu	Val	Tyr	Ala	Asn	Ser	Ala
			340					345					350		
Ala	Asn	Pro	Ile	Ile	Tyr	Asn	Phe	Leu	Ser	Gly	Lys	Phe	Arg	Glu	Gln
		355					360					365			
Phe	Lys	Ala	Ala	Phe	Ser	Cys	Cys	Leu	Pro	Gly	Leu	Gly	Pro	Cys	Gly
	370					375					380				
Ser	Leu	Lys	Ala	Pro	Ser	Pro	Arg	Ser	Ser	Ala	Ser	His	Lys	Ser	Leu
385					390					395					400
Ser	Leu	Gln	Ser	Arg	Cys	Ser	Ile	Ser	Lys	Ile	Ser	Glu	His	Val	Val
				405					410					415	
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			420					425							

<210> 550
 <211> 1335
 <212> DNA
 <213> Homo sapiens
 <400> 550

Leu 145	Ser	Cys	Ile	Ala	Leu 150	Asp	Arg	Trp	Tyr	Ala 155	Ile	Cys	His	Pro	Leu 160
Met	Phe	Lys	Ser	Thr 165	Ala	Lys	Arg	Ala	Arg 170	Asn	Ser	Ile	Val	Ile	Ile
Trp	Ile	Val	Ser 180	Cys	Ile	Ile	Met	Ile	Pro 185	Gln	Ala	Ile	Val	Met	Glu
Cys	Ser	Thr 195	Val	Phe	Pro	Gly	Leu 200	Ala	Asn	Lys	Thr	Thr 205	Leu	Phe	Thr
Val	Cys 210	Asp	Glu	Arg	Trp	Gly 215	Gly	Glu	Ile	Tyr 220	Pro	Lys	Met	Tyr	His
Ile 225	Cys	Phe	Phe	Leu 230	Val	Thr	Tyr	Met	Ala 235	Pro	Leu	Cys	Leu	Met	Val 240
Leu	Ala	Tyr	Leu	Gln 245	Ile	Phe	Arg	Lys	Leu 250	Trp	Cys	Arg	Gln	Ile	Pro 255
Gly	Thr	Ser	Ser 260	Val	Val	Gln	Arg	Lys 265	Trp	Lys	Pro	Leu	Gln	Pro	Val
Ser	Gln	Pro 275	Arg	Gly	Pro	Gly	Gln 280	Pro	Thr	Lys	Ser	Arg 285	Met	Ser	Ala
Val 290	Ala	Ala	Glu	Ile	Lys	Gln 295	Ile	Arg	Ala	Arg 300	Arg	Lys	Thr	Lys	Arg
Met 305	Leu	Met	Val	Val 310	Leu	Leu	Val	Phe	Ala 315	Ile	Cys	Tyr	Leu	Pro	Ile 320
Ser	Ile	Leu	Asn 325	Val	Leu	Lys	Arg	Val	Phe 330	Gly	Met	Phe	Ala	His	Thr 335
Glu	Asp	Arg	Glu 340	Thr	Val	Tyr	Ala	Trp 345	Phe	Thr	Phe	Ser	His 350	Trp	Leu
Val	Tyr 355	Ala	Asn	Ser	Ala	Ala	Asn 360	Pro	Ile	Ile	Tyr	Asn 365	Phe	Leu	Ser
Gly 370	Lys	Phe	Arg	Glu	Glu	Phe 375	Lys	Ala	Ala	Phe	Ser 380	Cys	Cys	Cys	Leu
Gly 385	Val	His	His	Arg	Gln 390	Glu	Asp	Arg	Leu	Thr 395	Arg	Gly	Arg	Thr	Ser 400
Thr	Glu	Ser	Arg	Lys 405	Ser	Leu	Thr	Thr	Gln 410	Ile	Ser	Asn	Phe	Asp	Asn 415
Ile	Ser	Lys	Leu 420	Ser	Glu	Gln	Val	Val 425	Leu	Thr	Ser	Ile	Ser	Thr	Leu 430
Pro	Ala	Ala	Asn 435	Gly	Ala	Gly	Pro	Leu	Gln	Asn	Trp				

<210> 552
 <211> 1407
 <212> DNA
 <213> Homo sapiens

<400> 552
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 gccaatgagc tgatgggctt caatgattcc tctccagggt gtccctgggat gtgggacaac 180
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 ggtgacagta actccttaga tctctcagac atgggagtggt tgagccggaa ctgcacggag 360
 gatggctggt cggaaccctt ccctcattac tttgatgcct gtggggttga tgaatatgaa 420
 tctgagactg gggaccagga ttattactac ctgtcagtga aggccctcta cacggttggc 480
 tacagcacat cctcgtcac cctcaccact gccatgggtca tcccttgtcg cttccggaag 540
 ctgcactgca cagcaactt catccacatg aacctgtttg tgtcgttcat gctgagggcg 600
 atctccgtct tcatcaaaga ctggattctg tatgcggagc aggacagcaa ccaactgcttc 660
 atctccactg tggaatgtaa ggccgtcatg gttttcttcc actactgtgt tgtgtccaac 720
 tacttctggc tgttcatcga gggcctgtac ctcttctactc tgcctgggtgga gaccttcttc 780
 cctgaaagga gatacttcta ctggtacacc atcattgggt gggggacccc aactgtgtgt 840
 gtgacagtgt gggctacgct gagactctac tttgatgaca caggctgctg ggatatgaat 900
 gacagcacag ctctgtgggt ggtgatcaaa ggccctgtgg ttggctctat catggttaac 960
 tttgtgcttt ttattggcat tatcgtcatc ctgtgcaga aacttcagtc tccagacatg 1020
 ggaggcaatg agtccagcat ctacttgcca ctggcccgtt cccccctgct gctcatccca 1080
 ctattcggaa tccactacac agtatttggc ttctcccagc agaatgtcag caaaagggaa 1140
 agactcgtgt ttgagctggg gctgggctcc ttccagggtt ttgtgggtggc tgttctctac 1200
 tgttttctga atggtgaggt acaagcggag atcaagcgaa aatggcgaag ctggaaggtg 1260
 aacogttaact tcgctgtgga cttcaagcac cgacaccgtt ctctggccag cagtgggggtg 1320
 aatgggggca cccagctctc catcctgagc aagagcagct cccaaatccg catgtctggc 1380
 ctccctgctg acaatctggc cacctga 1407

<210> 553
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 553
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 1 5 10 15
 Met Ala Pro Ala Met His Ser Asp Cys Ile Phe Lys Lys Glu Gln Ala
 20 25 30
 Met Cys Leu Glu Lys Ile Gln Arg Ala Asn Glu Leu Met Gly Phe Asn
 35 40 45
 Asp Ser Ser Pro Gly Cys Pro Gly Met Trp Asp Asn Ile Thr Cys Trp
 50 55 60
 Lys Pro Ala His Val Gly Glu Met Val Leu Val Ser Cys Pro Glu Leu
 65 70 75 80
 Phe Arg Ile Phe Asn Pro Asp Gln Val Trp Glu Thr Glu Thr Ile Gly
 85 90 95

Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Ile Lys Arg Lys Trp Arg
 405 410 415

Ser Trp Lys Val Asn Arg Tyr Phe Ala Val Asp Phe Lys His Arg His
 420 425 430

Pro Ser Leu Ala Ser Ser Gly Val Asn Gly Gly Thr Gln Leu Ser Ile
 435 440 445

Leu Ser Lys Ser Ser Ser Gln Ile Arg Met Ser Gly Leu Pro Ala Asp
 450 455 460

Asn Leu Ala Thr
 465

<210> 554
 <211> 1029
 <212> DNA
 <213> Homo sapiens

<400> 554
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 gccgcctgt acccttgcaa gaaattcaat gagataaaga tcttcattgt gaacctcacc 180
 atggcggaca tgctcttctt gatcaccttg ccactttgga ttgtctacta ccaaaaccag 240
 ggcaactgga tactcccaa attcctgtgc aacgtggctg gctgcctttt cttcatcaac 300
 acctactgct ctgtggcctt cctgggctgc atcacttata accgcttcca ggcagtaact 360
 cgcccacatca agactgctca ggccaacacc cgcaagcgtg gcatctcttt gtccttggtc 420
 atctgggtgg ccattgtggg agctgcatcc tacttctca tcctggactc caccaacaca 480
 gtgcccagca gtgctggctc aggcaacgtc actcgctgct ttgagcatta cgagaagggc 540
 agcgtgccag tctcatcat ccacatcttc atcgtgttca gcttcttctt ggtcttctc 600
 atcatctctt tctgcaacct ggtcatcatc cgtacctgct tcatgcagcc ggtgcagcag 660
 cagcgcaacg ctgaagtcaa gcgcggggcg aagtggatgg tgtgcacggt cttggcgggtg 720
 ttcacatctt gcttctgtgc ccaccacgtg gtgcagctgc cctggaccct tgctgagctg 780
 ggcttccagg acagcaaatt ccaccaggcc attaatgatg cacatcaggt caccctctgc 840
 ctcttagca ccaactgtgt cttagaccct gttatctact gtttcctcac caagaagttc 900
 cgcaagcacc tcaccgaaaa gttctacagc atgcgcagta gccggaaatg ctcccggggc 960
 accacggata cggtcactga agtggttgtg ccattcaacc agatccctgg caattccctc 1020
 aaaaattag 1029

<210> 555
 <211> 342
 <212> PRT
 <213> Homo sapiens

<400> 555
 Met Glu Pro His Asp Ser Ser His Met Asp Ser Glu Phe Arg Tyr Thr
 1 5 10 15
 Leu Phe Pro Ile Val Tyr Ser Ile Ile Phe Val Leu Gly Val Ile Ala
 20 25 30
 Asn Gly Tyr Val Leu Trp Val Phe Ala Arg Leu Tyr Pro Cys Lys Lys
 35 40 45

Variable	Mean	SD	Min	Max
Age	38.5	12.5	18	65
Gender	0.5	0.5	0	1
Marital status	0.5	0.5	0	1
Education	12.5	2.5	9	16
Income	3500	1500	1000	8000
Health status	0.5	0.5	0	1
Smoking status	0.3	0.5	0	1
Alcohol consumption	0.2	0.4	0	1
Exercise frequency	0.5	0.5	0	1
Stress level	0.5	0.5	0	1
Sleep quality	0.5	0.5	0	1
Work satisfaction	0.5	0.5	0	1
Life satisfaction	0.5	0.5	0	1
Depression score	10	15	0	50
Anxiety score	15	20	0	60
Quality of life score	70	10	50	100

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<210> 557
<211> 402
<212> PRT
<213> Homo sapiens
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Met	Ser	Pro	Cys	Gly	Pro	Leu	Asn	Leu	Ser	Leu	Ala	Gly	Glu	Ala	Thr
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Thr	Cys	Ala	Ala	Pro	Trp	Val	Pro	Asn	Thr	Ser	Ala	Val	Pro	Pro	Ser
			20					25					30		
Gly	Ala	Ser	Pro	Ala	Leu	Pro	Ile	Phe	Ser	Met	Thr	Leu	Gly	Ala	Val
		35					40					45			
Ser	Asn	Leu	Leu	Ala	Leu	Ala	Leu	Leu	Ala	Gln	Ala	Ala	Gly	Arg	Leu
	50					55					60				
Arg	Arg	Arg	Arg	Ser	Ala	Thr	Thr	Phe	Leu	Leu	Phe	Val	Ala	Ser	Leu
65					70					75					80
Leu	Ala	Thr	Asp	Leu	Ala	Gly	His	Val	Ile	Pro	Gly	Ala	Leu	Val	Leu
				85					90					95	
Arg	Leu	Tyr	Thr	Ala	Gly	Arg	Ala	Pro	Ala	Gly	Gly	Ala	Cys	His	Phe
			100					105					110		

Leu Gly Gly Cys Met Val Phe Phe Gly Leu Cys Pro Leu Leu Leu Gly
 115 120 125
 Cys Gly Met Ala Val Glu Arg Cys Val Gly Val Thr Arg Pro Leu Leu
 130 135 140
 His Ala Ala Arg Val Ser Val Ala Arg Ala Arg Leu Ala Leu Ala Ala
 145 150 155 160
 Val Ala Ala Val Ala Leu Ala Val Ala Leu Leu Pro Leu Ala Arg Val
 165 170 175
 Gly Arg Tyr Glu Leu Gln Tyr Pro Gly Thr Trp Cys Phe Ile Gly Leu
 180 185 190
 Gly Pro Pro Gly Gly Trp Arg Gln Ala Leu Leu Ala Gly Leu Phe Ala
 195 200 205
 Ser Leu Gly Leu Val Ala Leu Leu Ala Ala Leu Val Cys Asn Thr Leu
 210 215 220
 Ser Gly Leu Ala Leu His Arg Ala Arg Trp Arg Arg Arg Ser Arg Arg
 225 230 235 240
 Pro Pro Pro Ala Ser Gly Pro Asp Ser Arg Arg Arg Trp Gly Ala His
 245 250 255
 Gly Pro Arg Ser Ala Ser Ala Ser Ser Ala Ser Ser Ile Ala Ser Ala
 260 265 270
 Ser Thr Phe Phe Gly Gly Ser Arg Ser Ser Gly Ser Ala Arg Arg Ala
 275 280 285
 Arg Ala His Asp Val Glu Met Lys Gly Gln Leu Val Gly Ile Met Val
 290 295 300
 Val Ser Cys Ile Cys Trp Ser Pro Met Leu Val Leu Val Ala Leu Ala
 305 310 315 320
 Val Gly Gly Trp Ser Ser Thr Ser Leu Gln Arg Pro Leu Phe Leu Ala
 325 330 335
 Val Arg Leu Ala Ser Trp Asn Gln Ile Leu Asp Pro Trp Val Tyr Ile
 340 345 350
 Leu Leu Arg Gln Ala Val Leu Arg Gln Leu Leu Arg Leu Leu Pro Pro
 355 360 365
 Arg Ala Gly Ala Lys Gly Gly Pro Ala Gly Leu Gly Leu Thr Pro Ser
 370 375 380
 Ala Trp Glu Ala Ser Ser Leu Arg Ser Ser Arg His Ser Gly Leu Ser
 385 390 395 400
 His Phe

<210> 558
 <211> 1077
 <212> DNA
 <213> Homo sapiens

<400> 558
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 atagcactgg cgctgctggc gcgccgtgg cggggggacg tggggtgcag cgccggccgc 180
 aggagctccc tctccttggt ccacgtgctg gtgaccgagc tgggtgttcac cgacctgctc 240
 gggacctgcc tcatcagccc agtgggtactg gcttcgtacg cgcggaacca gacctggtg 300
 gcaactggcg ccgagagccg cgcgtgcacc tacttcgctt tcgccatgac cttcttcagc 360
 ctggccacga tgcctatgct cttcgccatg gccctggagc gctacctctc gatcgggcac 420
 ccctacttct accagcgccg cgtctcggcc tccggggggc tggcctgct gcctgtcatc 480
 tatgcagtct ccctgctctt ctgctcgtg ccgctgctgg actatgggca gtacgtccag 540
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 gccaccctgc tgctgcttct cattgtctcg gtgctcgctt gcaacttcag tgtcattctc 660
 aacctcatcc gcatgcaccg ccgaagccgg agaagccgct gcggaccttc cctgggcagt 720
 ggccggggcg gccccggggc ccgcaggaga ggggaaagg tgtccatggc ggaggagacg 780
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 acgatttttg catatatgaa tgaaacctct tcccgaagg aaaaatggga cctccaagct 900
 cttagggttt tatcaattaa ttcaataatt gaccttggtg tctttgccat ccttaggcct 960
 cctgttctga gactaatgcg ttcagtcctc tgtgtcgga ttccattaag aacacaagat 1020
 gcaacacaaa cttcctgttc tacacagtca gatgccagta aacaggctga cctttga 1077

<210> 559
 <211> 358
 <212> PRT
 <213> Homo sapiens

<400> 559
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 Gln Trp Leu Pro Pro Gly Glu Ser Pro Ala Ile Ser Ser Val Met Phe
 20 25 30
 Ser Ala Gly Val Leu Gly Asn Leu Ile Ala Leu Ala Leu Ala Arg
 35 40 45
 Arg Trp Arg Gly Asp Val Gly Cys Ser Ala Gly Arg Arg Ser Ser Leu
 50 55 60
 Ser Leu Phe His Val Leu Val Thr Glu Leu Val Phe Thr Asp Leu Leu
 65 70 75 80
 Gly Thr Cys Leu Ile Ser Pro Val Val Leu Ala Ser Tyr Ala Arg Asn
 85 90 95
 Gln Thr Leu Val Ala Leu Ala Pro Glu Ser Arg Ala Cys Thr Tyr Phe
 100 105 110
 Ala Phe Ala Met Thr Phe Phe Ser Leu Ala Thr Met Leu Met Leu Phe
 115 120 125

105049-622660

Ala Met Ala Leu Glu Arg Tyr Leu Ser Ile Gly His Pro Tyr Phe Tyr
 130 135 140

Gln Arg Arg Val Ser Ala Ser Gly Gly Leu Ala Val Leu Pro Val Ile
 145 150 155 160

Tyr Ala Val Ser Leu Leu Phe Cys Ser Leu Pro Leu Leu Asp Tyr Gly
 165 170 175

Gln Tyr Val Gln Tyr Cys Pro Gly Thr Trp Cys Phe Ile Arg His Gly
 180 185 190

Arg Thr Ala Tyr Leu Gln Leu Tyr Ala Thr Leu Leu Leu Leu Ile
 195 200 205

Val Ser Val Leu Ala Cys Asn Phe Ser Val Ile Leu Asn Leu Ile Arg
 210 215 220

Met His Arg Arg Ser Arg Arg Ser Arg Cys Gly Pro Ser Leu Gly Ser
 225 230 235 240

Gly Arg Gly Gly Pro Gly Ala Arg Arg Arg Gly Glu Arg Val Ser Met
 245 250 255

Ala Glu Glu Thr Asp His Lys Ile Leu Leu Ala Ile Met Thr Ile Thr
 260 265 270

Phe Ala Val Cys Ser Leu Pro Phe Thr Ile Phe Ala Tyr Met Asn Glu
 275 280 285

Thr Ser Ser Arg Lys Glu Lys Trp Asp Leu Gln Ala Leu Arg Phe Leu
 290 295 300

Ser Ile Asn Ser Ile Ile Asp Pro Trp Val Phe Ala Ile Leu Arg Pro
 305 310 315 320

Pro Val Leu Arg Leu Met Arg Ser Val Leu Cys Cys Arg Ile Ser Leu
 325 330 335

Arg Thr Gln Asp Ala Thr Gln Thr Ser Cys Ser Thr Gln Ser Asp Ala
 340 345 350

Ser Lys Gln Ala Asp Leu
 355

<210> 560
 <211> 1467
 <212> DNA
 <213> Homo sapiens

<400> 560
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 gtgctgtgca agtcgcgcaa ggagcagaag gagacgacct tctacacgct ggtatgtggg 180
 ctggctgtca ccgacctgtt gggcactttg ttggtgagcc cggtgaccat cgccacgtac 240

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ttcttcagcc tgtccggcct cagcatcatc tgcgccatga gtgtcgagcg ctacctggcc 360
atcaaccatg cctatttcta cagccactac gtggacaagc gattggcggg cctcacgctc 420
tttgagctct atgcgtccaa cgtgctcttt tgcgcgctgc ccaacatggg tctcggttagc 480
tcgcggtctgc agtaccacaga cacctggtgc ttcacgcact ggaccaccaa cgtgacggcg 540
cacgcgcgct actcctacat gtacgcgggc ttcagctcct tctcattct cgccaccgctc 600
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cgccgcagtc cgggcgcgca gatccagatg aagatcttac tcattgccac ctccctggtg 840
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agtttgagc gagaagtcag taaaaatcca gatttgcagg ccatccgaat tgcttctgtg 960
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atagagaaga tcaaatgcct cttctgccgc attggcggtt cccgcaggga gcgctccgga 1080
cagcactgct cagacagtca aaggacatct tctgccatgt caggccactc tcgctccttc 1140
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gactcttcac agggtcagga ctccagagat gtcttaactg tggatgagggc tgggtgggagc 1380
ggcagggctg ggctgcccc taaggggagc tccctgcaag tcacatttcc cagtgaagaa 1440
ctgaacttat cagaaaaatg tatataa 1467

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<210> 561
 <211> 488
 <212> PRT
 <213> Homo sapiens

<400> 561

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Leu	Asn	Ser	Pro	Val	Thr	Ile	Pro	Ala	Val	Met	Phe	Ile	Phe	Gly	Val
			20					25					30		
Val	Gly	Asn	Leu	Val	Ala	Ile	Val	Val	Leu	Cys	Lys	Ser	Arg	Lys	Glu
	35					40					45				
Gln	Lys	Glu	Thr	Thr	Phe	Tyr	Thr	Leu	Val	Cys	Gly	Leu	Ala	Val	Thr
	50					55					60				
Asp	Leu	Leu	Gly	Thr	Leu	Leu	Val	Ser	Pro	Val	Thr	Ile	Ala	Thr	Tyr
	65				70					75					80
Met	Lys	Gly	Gln	Trp	Pro	Gly	Gly	Gln	Pro	Leu	Cys	Glu	Tyr	Ser	Thr
			85					90						95	
Phe	Ile	Leu	Leu	Phe	Phe	Ser	Leu	Ser	Gly	Leu	Ser	Ile	Ile	Cys	Ala
		100					105						110		
Met	Ser	Val	Glu	Arg	Tyr	Leu	Ala	Ile	Asn	His	Ala	Tyr	Phe	Tyr	Ser
	115						120					125			
His	Tyr	Val	Asp	Lys	Arg	Leu	Ala	Gly	Leu	Thr	Leu	Phe	Ala	Val	Tyr
	130					135					140				
Ala	Ser	Asn	Val	Leu	Phe	Cys	Ala	Leu	Pro	Asn	Met	Gly	Leu	Gly	Ser

145					150					155					160	
Ser	Arg	Leu	Gln	Tyr	Pro	Asp	Thr	Trp	Cys	Phe	Ile	Asp	Trp	Thr	Thr	
				165					170					175		
Asn	Val	Thr	Ala	His	Ala	Ala	Tyr	Ser	Tyr	Met	Tyr	Ala	Gly	Phe	Ser	
				180					185					190		
Ser	Phe	Leu	Ile	Leu	Ala	Thr	Val	Leu	Cys	Asn	Val	Leu	Val	Cys	Gly	
				195					200					205		
Ala	Leu	Leu	Arg	Met	His	Arg	Gln	Phe	Met	Arg	Arg	Thr	Ser	Leu	Gly	
				210					215					220		
Thr	Glu	Gln	His	His	Ala	Ala	Ala	Ala	Ala	Ser	Val	Ala	Ser	Arg	Gly	
225					230					235					240	
His	Pro	Ala	Ala	Ser	Pro	Ala	Leu	Pro	Arg	Leu	Ser	Asp	Phe	Arg	Arg	
				245					250					255		
Arg	Arg	Ser	Phe	Arg	Arg	Ile	Ala	Gly	Ala	Glu	Ile	Gln	Met	Lys	Ile	
				260					265					270		
Leu	Leu	Ile	Ala	Thr	Ser	Leu	Val	Val	Leu	Ile	Cys	Ser	Ile	Pro	Leu	
				275					280					285		
Val	Val	Arg	Val	Phe	Val	Asn	Gln	Leu	Tyr	Gln	Pro	Ser	Leu	Glu	Arg	
				290					295					300		
Glu	Val	Ser	Lys	Asn	Pro	Asp	Leu	Gln	Ala	Ile	Arg	Ile	Ala	Ser	Val	
305					310					315					320	
Asn	Pro	Ile	Leu	Asp	Pro	Trp	Ile	Tyr	Ile	Leu	Leu	Arg	Lys	Thr	Val	
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Leu	Ser	Lys	Ala	Ile	Glu	Lys	Ile	Lys	Cys	Leu	Phe	Cys	Arg	Ile	Gly	
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Gly	Ser	Arg	Arg	Glu	Arg	Ser	Gly	Gln	His	Cys	Ser	Asp	Ser	Gln	Arg	
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Thr	Ser	Ser	Ala	Met	Ser	Gly	His	Ser	Arg	Ser	Phe	Ile	Ser	Arg	Glu	
				370					375					380		
Leu	Lys	Glu	Ile	Ser	Ser	Thr	Ser	Gln	Thr	Leu	Leu	Pro	Asp	Leu	Ser	
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				405					410					415		
Gly	Val	Pro	Gly	Met	Gly	Leu	Ala	Gln	Glu	Asp	Thr	Thr	Ser	Leu	Arg	
				420					425					430		
Thr	Leu	Arg	Ile	Ser	Glu	Thr	Ser	Asp	Ser	Ser	Gln	Gly	Gln	Asp	Ser	
				435					440					445		
Glu	Ser	Val	Leu	Leu	Val	Asp	Glu	Ala	Gly	Gly	Ser	Gly	Arg	Ala	Gly	

450

455

460

Pro Ala Pro Lys Gly Ser Ser Leu Gln Val Thr Phe Pro Ser Glu Thr
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Leu Asn Leu Ser Glu Lys Cys Ile
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<210> 562

<211> 1782

<212> DNA

<213> Homo sapiens

<400> 562

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<210> 563

<211> 593

<212> PRT

<213> Homo sapiens

<400> 563

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		35					40					45			
Glu	Lys	Arg	Leu	Lys	Glu	Val	Leu	Gln	Arg	Pro	Ala	Ser	Ile	Met	Glu
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Ser	Asp	Lys	Gly	Trp	Thr	Ser	Ala	Ser	Thr	Ser	Gly	Lys	Pro	Arg	Lys
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Asp	Lys	Ala	Ser	Gly	Lys	Leu	Tyr	Pro	Glu	Ser	Glu	Glu	Asp	Lys	Glu
				85					90					95	
Ala	Pro	Thr	Gly	Ser	Arg	Tyr	Arg	Gly	Arg	Pro	Cys	Leu	Pro	Glu	Trp
			100					105					110		
Asp	His	Ile	Leu	Cys	Trp	Pro	Leu	Gly	Ala	Pro	Gly	Glu	Val	Val	Ala
		115					120					125			
Val	Pro	Cys	Pro	Asp	Tyr	Ile	Tyr	Asp	Phe	Asn	His	Lys	Gly	His	Ala
	130					135					140				
Tyr	Arg	Arg	Cys	Asp	Arg	Asn	Gly	Ser	Trp	Glu	Leu	Val	Pro	Gly	His
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Asn	Arg	Thr	Trp	Ala	Asn	Tyr	Ser	Glu	Cys	Val	Lys	Phe	Leu	Thr	Asn
				165					170					175	
Glu	Thr	Arg	Glu	Arg	Glu	Val	Phe	Asp	Arg	Leu	Gly	Met	Ile	Tyr	Thr
			180					185					190		
Val	Gly	Tyr	Ser	Val	Ser	Leu	Ala	Ser	Leu	Thr	Val	Ala	Val	Leu	Ile
		195					200					205			
Leu	Ala	Tyr	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	Asn	Tyr	Ile	His	Met
	210					215					220				
His	Leu	Phe	Leu	Ser	Phe	Met	Leu	Arg	Ala	Val	Ser	Ile	Phe	Val	Lys
225					230					235					240
Asp	Ala	Val	Leu	Tyr	Ser	Gly	Ala	Thr	Leu	Asp	Glu	Ala	Glu	Arg	Leu
				245					250					255	
Thr	Glu	Glu	Glu	Leu	Arg	Ala	Ile	Ala	Gln	Ala	Pro	Pro	Pro	Pro	Ala
			260					265					270		
Thr	Ala	Ala	Ala	Gly	Tyr	Ala	Gly	Cys	Arg	Val	Ala	Val	Thr	Phe	Phe
		275					280					285			
Leu	Tyr	Phe	Leu	Ala	Thr	Asn	Tyr	Tyr	Trp	Ile	Leu	Val	Glu	Gly	Leu
	290					295					300				
Tyr	Leu	His	Ser	Leu	Ile	Phe	Met	Ala	Phe	Phe	Ser	Glu	Lys	Lys	Tyr
305					310					315					320
Leu	Trp	Gly	Phe	Thr	Val	Phe	Gly	Trp	Gly	Leu	Pro	Ala	Val	Phe	Val

	325		330		335
Ala Val Trp Val Ser Val Arg Ala Thr Leu Ala Asn Thr Gly Cys Trp	340	345	350		
Asp Leu Ser Ser Gly Asn Lys Lys Trp Ile Ile Gln Val Pro Ile Leu	355	360	365		
Ala Ser Ile Val Leu Asn Phe Ile Leu Phe Ile Asn Ile Val Arg Val	370	375	380		
Leu Ala Thr Lys Leu Arg Glu Thr Asn Ala Gly Arg Cys Asp Thr Arg	385	390	395	400	
Gln Gln Tyr Arg Lys Leu Leu Lys Ser Pro Leu Val Leu Met Pro Leu	405	410	415		
Phe Gly Val His Tyr Ile Val Phe Met Ala Thr Pro Tyr Thr Glu Val	420	425	430		
Ser Gly Thr Leu Trp Gln Val Gln Met His Tyr Glu Met Leu Phe Asn	435	440	445		
Ser Phe Gln Gly Phe Phe Val Ala Ile Ile Tyr Cys Phe Cys Asn Gly	450	455	460		
Glu Val Gln Ala Glu Ile Lys Lys Ser Trp Ser Arg Trp Thr Leu Ala	465	470	475	480	
Leu Asp Phe Lys Arg Lys Ala Arg Ser Gly Ser Ser Ser Tyr Ser Tyr	485	490	495		
Gly Pro Met Val Ser His Thr Ser Val Thr Asn Val Gly Pro Arg Val	500	505	510		
Gly Leu Gly Leu Pro Leu Ser Pro Arg Leu Leu Pro Thr Ala Thr Thr	515	520	525		
Asn Gly His Pro Gln Leu Pro Gly His Ala Lys Pro Gly Thr Pro Ala	530	535	540		
Leu Glu Thr Leu Glu Thr Thr Pro Pro Ala Met Ala Ala Pro Lys Asp	545	550	555	560	
Asp Gly Phe Leu Asn Gly Ser Cys Ser Gly Leu Asp Glu Glu Ala Ser	565	570	575		
Gly Pro Glu Arg Pro Pro Ala Leu Leu Gln Glu Glu Trp Glu Thr Val	580	585	590		

Met

<210> 564
 <211> 1653
 <212> DNA

Table 1. Demographic characteristics of the study population	
Age (years)	65.0 ± 1.5
Gender (male/female)	10/10
Education (years)	12.0 ± 1.0
Occupation (white/blue)	10/10
Marital status (married/divorced/widowed)	10/10/0
Smoking status (smoker/nonsmoker)	10/10
Alcohol consumption (yes/no)	10/10
Comorbidities (hypertension/diabetes/cholesterol)	10/10/0
Medication (antihypertensive/antidiabetic/anticholesterol)	10/10/0
Family history (hypertension/diabetes/cholesterol)	10/10/0
Physical activity (yes/no)	10/10
Stress level (high/low)	10/10
Sleep quality (good/poor)	10/10
Depression score (yes/no)	10/10
Overall health status (good/poor)	10/10

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gtgctgaaag	cgaaagtaca	atgtgaactc	aacatcacag	ctcaactcca	ggagggagaa	180
ggtaattgtt	tccctgaatg	ggatggactc	atttgttggc	ccagaggaac	agtggggaaa	240
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gagatgata	ttctaattgga	gaagccttcc	aggcctatgg	aatctaacc	agacactgaa	1620
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<211> 550

<213> Homo sapiens

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Thr Ile Glu Glu Gln Ile Val Leu Val Leu Lys Ala Lys Val Gln Cys
35 40 45

Glu Leu Asn Ile Thr Ala Gln Leu Gln Glu Gly Glu Gly Asn Cys Phe
50 55 60

Pro Glu Trp Asp Gly Leu Ile Cys Trp Pro Arg Gly Thr Val Gly Lys
65 70 75 80

Ile Ser Ala Val Pro Cys Pro Pro Tyr Ile Tyr Asp Phe Asn His Lys
85 90 95

Gly	Val	Ala	Phe	Arg	His	Cys	Asn	Pro	Asn	Gly	Thr	Trp	Asp	Phe	Met	100	105	110
His	Ser	Leu	Asn	Lys	Thr	Trp	Ala	Asn	Tyr	Ser	Asp	Cys	Leu	Arg	Phe	115	120	125
Leu	Gln	Pro	Asp	Ile	Ser	Ile	Gly	Lys	Gln	Glu	Phe	Phe	Glu	Arg	Leu	130	135	140
Tyr	Val	Met	Tyr	Thr	Val	Gly	Tyr	Ser	Ile	Ser	Phe	Gly	Ser	Leu	Ala	145	150	155
Val	Ala	Ile	Leu	Ile	Ile	Gly	Tyr	Phe	Arg	Arg	Leu	His	Cys	Thr	Arg	165	170	175
Asn	Tyr	Ile	His	Met	His	Leu	Phe	Val	Ser	Phe	Met	Leu	Arg	Ala	Thr	180	185	190
Ser	Ile	Phe	Val	Lys	Asp	Arg	Val	Val	His	Ala	His	Ile	Gly	Val	Lys	195	200	205
Glu	Leu	Glu	Ser	Leu	Ile	Met	Gln	Asp	Asp	Pro	Gln	Asn	Ser	Ile	Glu	210	215	220
Ala	Thr	Ser	Val	Asp	Lys	Ser	Gln	Tyr	Ile	Gly	Cys	Lys	Ile	Ala	Val	225	230	235
Val	Met	Phe	Ile	Tyr	Phe	Leu	Ala	Thr	Asn	Tyr	Tyr	Trp	Ile	Leu	Val	245	250	255
Glu	Gly	Leu	Tyr	Leu	His	Asn	Leu	Ile	Phe	Val	Ala	Phe	Phe	Ser	Asp	260	265	270
Thr	Lys	Tyr	Leu	Trp	Gly	Phe	Ile	Leu	Ile	Gly	Trp	Gly	Phe	Pro	Ala	275	280	285
Ala	Phe	Val	Ala	Ala	Trp	Ala	Val	Ala	Arg	Ala	Thr	Leu	Ala	Asp	Ala	290	295	300
Arg	Cys	Trp	Glu	Leu	Ser	Ala	Gly	Asp	Ile	Lys	Trp	Ile	Tyr	Gln	Ala	305	310	315
Pro	Ile	Leu	Ala	Ala	Ile	Gly	Leu	Asn	Phe	Ile	Leu	Phe	Leu	Asn	Thr	325	330	335
Val	Arg	Val	Leu	Ala	Thr	Lys	Ile	Trp	Glu	Thr	Asn	Ala	Val	Gly	His	340	345	350
Asp	Thr	Arg	Lys	Gln	Tyr	Arg	Lys	Leu	Ala	Lys	Ser	Pro	Leu	Val	Leu	355	360	365
Val	Leu	Val	Phe	Gly	Val	His	Tyr	Ile	Val	Phe	Val	Cys	Leu	Pro	His	370	375	380
Ser	Phe	Thr	Gly	Leu	Gly	Trp	Glu	Ile	Arg	Met	His	Cys	Glu	Leu	Phe	385	390	395

Phe Asn Ser Phe Gln Gly Phe Phe Val Ser Ile Ile Tyr Cys Tyr Cys
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Asn Gly Glu Val Gln Ala Glu Val Lys Lys Met Trp Ser Arg Trp Asn
420 425 430

Leu Ser Val Asp Trp Lys Arg Thr Pro Pro Cys Gly Ser Arg Arg Cys
435 440 445

Gly Ser Val Leu Thr Thr Val Thr His Ser Thr Ser Ser Gln Ser Gln
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Val Ala Ala Ser Thr Arg Met Val Leu Ile Ser Gly Lys Ala Ala Lys
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Ile Ala Ser Arg Gln Pro Asp Ser His Ile Thr Leu Pro Gly Tyr Val
485 490 495

Trp Ser Asn Ser Glu Gln Asp Cys Leu Pro His Ser Phe His Glu Glu
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Thr Lys Glu Asp Ser Gly Arg Gln Gly Asp Asp Ile Leu Met Glu Lys
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Pro Ser Arg Pro Met Glu Ser Asn Pro Asp Thr Glu Gly Cys Gln Gly
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Glu Thr Glu Asp Val Leu
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<210> 566

<211> 1323

<212> DNA

<213> Homo sapiens

<400> 566

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<400> 567
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 35 40 45
 Leu Ser Arg Glu Gln Thr Gly Asp Leu Gly Thr Glu Gln Pro Val Pro
 50 55 60
 Gly Cys Glu Gly Met Trp Asp Asn Ile Ser Cys Trp Pro Ser Ser Val
 65 70 75 80
 Pro Gly Arg Met Val Glu Val Glu Cys Pro Arg Phe Leu Arg Met Leu
 85 90 95
 Thr Ser Arg Asn Gly Ser Leu Phe Arg Asn Cys Thr Gln Asp Gly Trp
 100 105 110
 Ser Glu Thr Phe Pro Arg Pro Asn Leu Ala Cys Gly Val Asn Val Asn
 115 120 125
 Asp Ser Ser Asn Glu Lys Arg His Ser Tyr Leu Leu Lys Leu Lys Val
 130 135 140
 Met Tyr Thr Val Gly Tyr Ser Ser Ser Leu Val Met Leu Leu Val Ala
 145 150 155 160
 Leu Gly Ile Leu Cys Ala Phe Arg Arg Leu His Cys Thr Arg Asn Tyr
 165 170 175
 Ile His Met His Leu Phe Val Ser Phe Ile Leu Arg Ala Leu Ser Asn
 180 185 190
 Phe Ile Lys Asp Ala Val Leu Phe Ser Ser Asp Asp Val Thr Tyr Cys
 195 200 205
 Asp Pro His Arg Ala Gly Cys Lys Leu Val Met Val Leu Phe Gln Tyr
 210 215 220
 Cys Ile Met Ala Asn Tyr Ser Trp Leu Leu Val Glu Gly Leu Tyr Leu
 225 230 235 240
 His Thr Leu Leu Ala Ile Ser Phe Phe Ser Glu Arg Lys Tyr Leu Gln

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<210> 569
<211> 391
<212> PRT
<213> Homo sapiens

<400> 569

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Gly Ala Ala Asp Gly Met Glu Glu Pro Gly Arg Asn Ala Ser Gln Asn
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Gly Thr Leu Ser Glu Gly Gln Gly Ser Ala Ile Leu Ile Ser Phe Ile
50 55 60

Tyr Ser Val Val Cys Leu Val Gly Leu Cys Gly Asn Ser Met Val Ile
65 70 75 80

Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ala Thr Asn Ile Tyr
85 90 95

Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Leu Met Leu Ser Val Pro
100 105 110

Phe Leu Val Thr Ser Thr Leu Leu Arg His Trp Pro Phe Gly Ala Leu
115 120 125

Leu Cys Arg Leu Val Leu Ser Val Asp Ala Val Asn Met Phe Thr Ser
130 135 140

Ile Tyr Cys Leu Thr Val Leu Ser Val Asp Arg Tyr Val Ala Val Val
145 150 155 160

His Pro Ile Lys Ala Ala Arg Tyr Arg Arg Pro Thr Val Ala Lys Val
165 170 175

Val Asn Leu Gly Val Trp Val Leu Ser Leu Leu Val Ile Leu Pro Ile
180 185 190

Val Val Phe Ser Arg Thr Ala Ala Asn Ser Asp Gly Thr Val Ala Cys
195 200 205

Asn Met Leu Met Pro Glu Pro Ala Gln Arg Trp Leu Val Gly Phe Val
210 215 220

Leu Tyr Thr Phe Leu Met Gly Phe Leu Leu Pro Val Gly Ala Ile Cys
 225 230 235 240

Leu Cys Tyr Val Leu Ile Ile Ala Lys Met Arg Met Val Ala Leu Lys
 245 250 255

Ala Gly Trp Gln Gln Arg Lys Arg Ser Glu Arg Lys Ile Lys Leu Met
 260 265 270

Val Met Met Val Val Met Val Phe Val Ile Cys Trp Met Pro Phe Tyr
 275 280 285

Val Val Gln Leu Val Asn Val Phe Ala Glu Gln Asp Asp Ala Thr Val
 290 295 300

Ser Gln Leu Ser Val Ile Leu Gly Tyr Ala Asn Ser Cys Ala Asn Pro
 305 310 315 320

Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Lys Arg Ser Phe Gln Arg
 325 330 335

Ile Leu Cys Leu Ser Trp Met Asp Asn Ala Ala Glu Glu Pro Val Asp
 340 345 350

Tyr Tyr Ala Thr Ala Leu Lys Ser Arg Ala Tyr Ser Val Glu Asp Phe
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Gln Pro Glu Asn Leu Glu Ser Gly Gly Val Phe Arg Asn Gly Thr Cys
 370 375 380

Thr Ser Arg Ile Thr Thr Leu
 385 390

<210> 570
 <211> 1110
 <212> DNA
 <213> Homo sapiens

<400> 570
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 <211> 369
 <212> PRT
 <213> Homo sapiens

<400> 571
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 35 40 45
 Ile Tyr Phe Val Val Cys Ile Ile Gly Leu Cys Gly Asn Thr Leu Val
 50 55 60
 Ile Tyr Val Ile Leu Arg Tyr Ala Lys Met Lys Thr Ile Thr Asn Ile
 65 70 75 80
 Tyr Ile Leu Asn Leu Ala Ile Ala Asp Glu Leu Phe Met Leu Gly Leu
 85 90 95
 Pro Phe Leu Ala Met Gln Val Ala Leu Val His Trp Pro Phe Gly Lys
 100 105 110
 Ala Ile Cys Arg Val Val Met Thr Val Asp Gly Ile Asn Gln Phe Thr
 115 120 125
 Ser Ile Phe Cys Leu Thr Val Met Ser Ile Asp Arg Tyr Leu Ala Val
 130 135 140
 Val His Pro Ile Lys Ser Ala Lys Trp Arg Arg Pro Arg Thr Ala Lys
 145 150 155 160
 Met Ile Thr Met Ala Val Trp Gly Val Ser Leu Leu Val Ile Leu Pro
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 Ile Met Ile Tyr Ala Gly Leu Arg Ser Asn Gln Trp Gly Arg Ser Ser
 180 185 190
 Cys Thr Ile Asn Trp Pro Gly Glu Ser Gly Ala Trp Tyr Thr Gly Phe
 195 200 205
 Ile Ile Tyr Thr Phe Ile Leu Gly Phe Leu Val Pro Leu Thr Ile Ile
 210 215 220
 Cys Leu Cys Tyr Leu Phe Ile Ile Ile Lys Val Lys Ser Ser Gly Ile
 225 230 235 240
 Arg Val Gly Ser Ser Lys Arg Lys Lys Ser Glu Lys Lys Val Lys Arg

245 250 255

Met Val Ser Ile Val Val Ala Val Phe Ile Phe Cys Trp Leu Pro Phe
260 265 270

Tyr Ile Phe Asn Val Ser Ser Val Ser Met Ala Ile Ser Pro Thr Pro
275 280 285

Ala Leu Lys Gly Met Phe Asp Phe Val Val Val Leu Thr Tyr Ala Asn
290 295 300

Ser Cys Ala Asn Pro Ile Leu Tyr Ala Phe Leu Ser Asp Asn Phe Lys
305 310 315 320

Lys Ser Phe Gln Asn Val Leu Cys Leu Val Lys Val Ser Gly Thr Asp
325 330 335

Asp Gly Glu Arg Ser Asp Ser Lys Gln Asp Lys Ser Arg Leu Asn Glu
340 345 350

Thr Thr Glu Thr Gln Arg Thr Leu Leu Asn Gly Asp Leu Gln Thr Ser
355 360 365

Ile

<210> 572
<211> 1257
<212> DNA
<213> Homo sapiens

<400> 572

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<210> 573

<211> 418
 <212> PRT
 <213> Homo sapiens

<400> 573

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Asn Ala Ser Ser Ala Trp Pro Pro Asp Ala Thr Leu Gly Asn Val Ser
      20          25          30

Ala Gly Pro Ser Pro Ala Gly Leu Ala Val Ser Gly Val Leu Ile Pro
      35          40          45

Leu Val Tyr Leu Val Val Cys Val Val Gly Leu Leu Gly Asn Ser Leu
      50          55          60

Val Ile Tyr Val Val Leu Arg His Thr Ala Ser Pro Ser Val Thr Asn
      65          70          75          80

Val Tyr Ile Leu Asn Leu Ala Leu Ala Asp Glu Leu Phe Met Leu Gly
      85          90          95

Leu Pro Phe Leu Ala Ala Gln Asn Ala Leu Ser Tyr Trp Pro Phe Gly
      100          105          110

Ser Leu Met Cys Arg Leu Val Met Ala Val Asp Gly Ile Asn Gln Phe
      115          120          125

Thr Ser Ile Phe Cys Leu Thr Val Met Ser Val Asp Arg Tyr Leu Ala
      130          135          140

Val Val His Pro Thr Arg Ser Ala Arg Trp Arg Thr Ala Pro Val Ala
      145          150          155          160

Arg Thr Val Ser Ala Ala Val Trp Val Ala Ser Ala Val Val Val Leu
      165          170          175

Pro Val Val Val Phe Ser Gly Val Pro Arg Gly Met Ser Thr Cys His
      180          185          190

Met Gln Trp Pro Glu Pro Ala Ala Ala Trp Arg Ala Gly Phe Ile Ile
      195          200          205

Tyr Thr Ala Ala Leu Gly Phe Phe Gly Pro Leu Leu Val Ile Cys Leu
      210          215          220

Cys Tyr Leu Leu Ile Val Val Lys Val Arg Ser Ala Gly Arg Arg Val
      225          230          235          240

Trp Ala Pro Ser Cys Gln Arg Arg Arg Arg Ser Glu Arg Arg Val Lys
      245          250          255

Arg Met Val Val Ala Val Val Ala Leu Phe Val Leu Cys Trp Met Pro
      260          265          270

Phe Tyr Val Leu Asn Ile Val Asn Val Val Cys Pro Leu Pro Glu Glu
  
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275 280 285

Pro Ala Phe Phe Gly Leu Tyr Phe Leu Val Val Ala Leu Pro Tyr Ala
290 295 300

Asn Ser Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Tyr Arg Phe
305 310 315 320

Lys Gln Gly Phe Arg Arg Val Leu Leu Arg Pro Ser Arg Arg Val Arg
325 330 335

Ser Gln Glu Pro Thr Val Gly Pro Pro Glu Lys Thr Glu Glu Glu Asp
340 345 350

Glu Glu Glu Glu Asp Gly Glu Glu Ser Arg Glu Gly Gly Lys Gly Lys
355 360 365

Glu Met Asn Gly Arg Val Ser Gln Ile Thr Gln Pro Gly Thr Ser Gly
370 375 380

Gln Glu Arg Pro Pro Ser Arg Val Ala Ser Lys Glu Gln Gln Leu Leu
385 390 395 400

Pro Gln Glu Ala Ser Thr Gly Glu Lys Ser Ser Thr Met Arg Ile Ser
405 410 415

Tyr Leu

<210> 574
<211> 1167
<212> DNA
<213> Homo sapiens

<400> 574

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<210> 575
 <211> 388
 <212> PRT
 <213> Homo sapiens

<400> 575

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Met Ser Ala Pro Ser Thr Leu Pro Pro Gly Gly Glu Glu Gly Leu Gly
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Thr Ala Trp Pro Ser Ala Ala Asn Ala Ser Ser Ala Pro Ala Glu Ala
      20           25           30

Glu Glu Ala Val Ala Gly Pro Gly Asp Ala Arg Ala Ala Gly Met Val
      35           40           45

Ala Ile Gln Cys Ile Tyr Ala Leu Val Cys Leu Val Gly Leu Val Gly
      50           55           60

Asn Ala Leu Val Ile Phe Val Ile Leu Arg Tyr Ala Lys Met Lys Thr
      65           70           75           80

Ala Thr Asn Ile Tyr Leu Leu Asn Leu Ala Val Ala Asp Glu Leu Phe
      85           90           95

Met Leu Ser Val Pro Phe Val Ala Ser Ser Ala Ala Leu Arg His Trp
      100          105          110

Pro Phe Gly Ser Val Leu Cys Arg Ala Val Leu Ser Val Asp Gly Leu
      115          120          125

Asn Met Phe Thr Ser Val Phe Cys Leu Thr Val Leu Ser Val Asp Arg
      130          135          140

Tyr Val Ala Val Val His Pro Leu Arg Ala Ala Thr Tyr Arg Arg Pro
      145          150          155          160

Ser Val Ala Lys Leu Ile Asn Leu Gly Val Trp Leu Ala Ser Leu Leu
      165          170          175

Val Thr Leu Pro Ile Ala Ile Phe Ala Asp Thr Arg Pro Ala Arg Gly
      180          185          190

Gly Gln Ala Val Ala Cys Asn Leu Gln Trp Pro His Pro Ala Trp Ser
      195          200          205

Ala Val Phe Val Val Tyr Thr Phe Leu Leu Gly Phe Leu Leu Pro Val
      210          215          220

Leu Ala Ile Gly Leu Cys Tyr Leu Leu Ile Val Gly Lys Met Arg Ala
      225          230          235          240

Val Ala Leu Arg Ala Gly Trp Gln Gln Arg Arg Arg Ser Glu Lys Lys
      245          250          255

Ile Lys Arg Leu Val Leu Met Val Val Val Val Phe Val Leu Cys Trp
      260          265          270

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Met Pro Phe Tyr Val Val Gln Leu Leu Asn Leu Val Val Thr Ser Leu
 275 280 285

Asp Ala Thr Val Asn His Val Ser Leu Ile Leu Ser Tyr Ala Asn Ser
 290 295 300

Cys Ala Asn Pro Ile Leu Tyr Gly Phe Leu Ser Asp Asn Phe Arg Arg
 305 310 315 320

Ser Phe Gln Arg Val Leu Cys Leu Arg Cys Cys Leu Leu Glu Gly Ala
 325 330 335

Gly Gly Ala Glu Glu Glu Pro Leu Asp Tyr Tyr Ala Thr Ala Leu Lys
 340 345 350

Ser Lys Gly Gly Ala Gly Cys Met Cys Pro Pro Leu Pro Cys Gln Gln
 355 360 365

Glu Ala Leu Gln Pro Glu Pro Gly Arg Lys Arg Ile Pro Leu Thr Arg
 370 375 380

Thr Thr Thr Phe
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<210> 576
 <211> 1095
 <212> DNA
 <213> Homo sapiens

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<210> 577
 <211> 364
 <212> PRT
 <213> Homo sapiens

[illegible]

267

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Gln	Cys	Leu	Glu	Glu	Ala	Gln	Leu	Glu	Asn	Glu	Thr	Ile	Gly	Cys	Ser
50						55				60					
Lys	Met	Trp	Asp	Asn	Leu	Thr	Cys	Trp	Pro	Ala	Thr	Pro	Arg	Gly	Gln
65				70						75				80	
Val	Val	Val	Leu	Ala	Cys	Pro	Leu	Ile	Phe	Lys	Leu	Phe	Ser	Ser	Ile
				85				90						95	
Gln	Gly	Arg	Asn	Val	Ser	Arg	Ser	Cys	Thr	Asp	Glu	Gly	Trp	Thr	His
		100						105				110			
Leu	Glu	Pro	Gly	Pro	Tyr	Pro	Ile	Ala	Cys	Gly	Leu	Asp	Asp	Lys	Ala
		115				120						125			
Ala	Ser	Leu	Asp	Glu	Gln	Gln	Thr	Met	Phe	Tyr	Gly	Ser	Val	Lys	Thr
130						135				140					
Gly	Tyr	Thr	Ile	Gly	Tyr	Gly	Leu	Ser	Leu	Ala	Thr	Leu	Leu	Val	Ala
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Thr	Ala	Ile	Leu	Ser	Leu	Phe	Arg	Lys	Leu	His	Cys	Thr	Arg	Asn	Tyr
				165				170						175	
Ile	His	Met	His	Leu	Phe	Ile	Ser	Phe	Ile	Leu	Arg	Ala	Ala	Ala	Val
		180						185				190			
Phe	Ile	Lys	Asp	Leu	Ala	Leu	Phe	Asp	Ser	Gly	Glu	Ser	Asp	Gln	Cys
		195				200						205			
Ser	Glu	Gly	Ser	Val	Gly	Cys	Lys	Ala	Ala	Met	Val	Phe	Phe	Gln	Tyr
210						215				220					
Cys	Val	Met	Ala	Asn	Phe	Phe	Trp	Leu	Leu	Val	Glu	Gly	Leu	Tyr	Leu
225				230						235				240	
Tyr	Thr	Leu	Leu	Ala	Val	Ser	Phe	Phe	Ser	Glu	Arg	Lys	Tyr	Phe	Trp
				245				250						255	
Gly	Tyr	Ile	Leu	Ile	Gly	Trp	Gly	Val	Pro	Ser	Thr	Phe	Thr	Met	Val
		260						265				270			
Trp	Thr	Ile	Ala	Arg	Ile	His	Phe	Glu	Asp	Tyr	Gly	Cys	Trp	Asp	Thr
		275				280						285			
Ile	Asn	Ser	Ser	Leu	Trp	Trp	Ile	Ile	Lys	Gly	Pro	Ile	Leu	Thr	Ser
290						295				300					
Ile	Leu	Val	Asn	Phe	Ile	Leu	Phe	Ile	Cys	Ile	Ile	Arg	Ile	Leu	Leu
305				310						315				320	
Gln	Lys	Leu	Arg	Pro	Pro	Asp	Ile	Arg	Lys	Ser	Asp	Ser	Ser	Pro	Tyr
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Ser Arg Leu Ala Arg Ser Pro Leu Leu Leu Ile Pro Leu Phe Gly Val
340 345 350

His Tyr Ile Met Phe Ala Phe Phe Pro Asp Asn Phe Lys Pro Glu Val
355 360 365

Lys Met Val Phe Glu Leu Val Val Gly Ser Phe Gln Gly Phe Val Val
370 375 380

Ala Ile Leu Tyr Cys Phe Leu Asn Gly Glu Val Gln Ala Glu Leu Arg
385 390 395 400

Arg Lys Trp Arg Arg Trp His Leu Gln Gly Val Leu Gly Trp Asn Pro
405 410 415

Lys Tyr Arg His Pro Ser Gly Gly Ser Asn Gly Ala Thr Cys Ser Thr
420 425 430

Gln Val Ser Met Leu Thr Arg Val Ser Pro Gly Ala Arg Arg Ser Ser
435 440 445

Ser Phe Gln Ala Glu Val Ser Leu Val
450 455

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<211> 1317
<212> DNA
<213> Homo sapiens

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<210> 581

<211> 438
 <212> PRT
 <213> Homo sapiens

<400> 581

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Met Arg Thr Leu Leu Pro Pro Ala Leu Leu Thr Cys Trp Leu Leu Ala
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Pro Val Asn Ser Ile His Pro Glu Cys Arg Phe His Leu Glu Ile Gln
          20          25          30

Glu Glu Glu Thr Lys Cys Thr Glu Leu Leu Arg Ser Gln Thr Glu Lys
          35          40          45

His Lys Ala Cys Ser Gly Val Trp Asp Asn Ile Thr Cys Trp Arg Pro
          50          55          60

Ala Asn Val Gly Glu Thr Val Thr Val Pro Cys Pro Lys Val Phe Ser
          65          70          75          80

Asn Phe Tyr Ser Lys Ala Gly Asn Ile Ser Lys Asn Cys Thr Ser Asp
          85          90          95

Gly Trp Ser Glu Thr Phe Pro Asp Phe Val Asp Ala Cys Gly Tyr Ser
          100          105          110

Asp Pro Glu Asp Glu Ser Lys Ile Thr Phe Tyr Ile Leu Val Lys Ala
          115          120          125

Ile Tyr Thr Leu Gly Tyr Ser Val Ser Leu Met Ser Leu Ala Thr Gly
          130          135          140

Ser Ile Ile Leu Cys Leu Phe Arg Lys Leu His Cys Thr Arg Asn Tyr
          145          150          155          160

Ile His Leu Asn Leu Phe Leu Ser Phe Ile Leu Arg Ala Ile Ser Val
          165          170          175

Leu Val Lys Asp Asp Val Leu Tyr Ser Ser Ser Gly Thr Leu His Cys
          180          185          190

Pro Asp Gln Pro Ser Ser Trp Val Gly Cys Lys Leu Ser Leu Val Phe
          195          200          205

Leu Gln Tyr Cys Ile Met Ala Asn Phe Phe Trp Leu Leu Val Glu Gly
          210          215          220

Leu Tyr Leu His Thr Leu Leu Val Ala Met Leu Pro Pro Arg Arg Cys
          225          230          235          240

Phe Leu Ala Tyr Leu Leu Ile Gly Trp Gly Leu Pro Thr Val Cys Ile
          245          250          255

Gly Ala Trp Thr Ala Ala Arg Leu Tyr Leu Glu Asp Thr Gly Cys Trp
          260          265          270

Asp Thr Asn Asp His Ser Val Pro Trp Trp Val Ile Arg Ile Pro Ile
  
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Ser Gln Tyr Lys Arg Leu Ala Lys Ser Pro Leu Leu Leu Ile Pro Leu		
325	330	335
Phe Gly Val His Tyr Met Val Phe Ala Val Phe Pro Ile Ser Ile Ser		
340	345	350
Ser Lys Tyr Gln Ile Leu Phe Glu Leu Cys Leu Gly Ser Phe Gln Gly		
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Gln	Lys 290	Lys	Ile	Arg	Gly	Ile 295	Leu	Glu	Ser	Leu	Met 300	Cys	Asn	Glu	Ser
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Tyr Val Leu Gln Leu Thr Gln Leu Ser Ile Ser Arg Pro Thr Leu Thr 275 280 285		
Phe Val Tyr Leu Tyr Asn Ala Ala Ile Ser Leu Gly Tyr Ala Asn Ser 290 295 300		
Cys Leu Asn Pro Phe Val Tyr Ile Val Leu Cys Glu Thr Phe Arg Lys 305 310 315 320		
Arg Leu Val Leu Ser Val Lys Pro Ala Ala Gln Gly Gln Leu Arg Ala 325 330 335		
Val Ser Asn Ala Gln Thr Ala Asp Glu Glu Arg Thr Glu Ser Lys Gly 340 345 350		
Thr Ser Arg Met Gly Cys Thr Leu Ser Ala Glu Asp Lys Ala Ala Val 355 360 365		
Glu Arg Ser Lys Met Ile Asp Arg Asn Leu Arg Glu Asp Gly Glu Lys 370 375 380		
Ala Ala Arg Glu Val Lys Leu Leu Leu Leu Gly Ala Gly Glu Ser Gly 385 390 395 400		
Lys Ser Thr Ile Val Lys Gln Met Lys Ile Ile His Glu Ala Gly Tyr 405 410 415		
Ser Glu Glu Glu Cys Lys Gln Tyr Lys Ala Val Val Tyr Ser Asn Thr 420 425 430		
Ile Gln Ser Ile Ile Ala Ile Ile Arg Ala Met Gly Arg Leu Lys Ile 435 440 445		
Asp Phe Gly Asp Ala Ala Arg Ala Asp Asp Ala Arg Gln Leu Phe Val 450 455 460		
Leu Ala Gly Ala Ala Glu Glu Gly Phe Met Thr Ala Glu Leu Ala Gly 465 470 475 480		
Val Ile Lys Arg Leu Trp Lys Asp Ser Gly Val Gln Ala Cys Phe Asn 485 490 495		
Arg Ser Arg Glu Tyr Gln Leu Asn Asp Ser Ala Ala Tyr Tyr Leu Asn 500 505 510		
Asp Leu Asp Arg Ile Ala Gln Pro Asn Tyr Ile Pro Thr Gln Gln Asp		

